

Land Use Compatibility Analysis

PHOTOVOLTAIC SOLAR FARM BORREGO SPRINGS, CALIFORNIA

P09-012, P09-014, ER No. 09-05-001-RPL2

Prepared for:

County of San Diego
Department of Planning and Land Use
5201 Ruffin Road, Suite B
San Diego, CA 92123-1666
Contact: Patrick Brown, Project Manager

Applicant:

EE Borrego Land, LLC
4660 La Jolla Village Drive, #400
San Diego, CA 92122
Contact: David Tomlinson
Phone 858.638.7115
Direct: 425.747.7190

Prepared by:

RBF Consulting
9755 Clairemont Mesa Boulevard, Suite 100
San Diego, California 92124
Contact: Steve Wragg
Phone: 858-614-5059
Fax: 858-614-5001

RBF JN 25-103821.001

June 2010 [\(Revised September 2010\)](#)

TABLE OF CONTENTS

1.0	EXECUTIVE SUMMARY	1
2.0	INTRODUCTION	2
2.1	Project Location	2
2.2	Project Description	2
2.3	General Plan Land Use and Zoning Designations	14
2.4	Surrounding Land Uses.....	15
3.0	PLAN CONSISTENCY ANALYSIS.....	31
3.1	General and Subregional Plan Consistency	31
3.2	Major Use Permit Findings (County Zoning Ordinance)	65
3.3	Potential to Induce Similar Land Uses.....	97
4.0	CONCLUSIONS	101
5.0	REFERENCES	102
6.0	REPORT PREPARERS	103

List of Tables

Table 1 Existing General Plan Land Use / Regional Category.....	14
Table 2 Existing Zoning	14
Table 3 Development Characteristics of the Project and Surrounding Uses	71
Table 4 Anticipated Maintenance Schedule	84

List of Figures

Figure 1	Regional / Local Vicinity Map.....	17
Figure 2	Aerial Photograph.....	19
Figure 3A	Major Use Permit Plot Plan	21
Figure 3B	Major Use Permit Plot Plan	23
Figure 3C	Major Use Permit Plot Plan – Elevations/Details	25
Figure 3D	Typical PV Solar Layout	27
Figure 3E	SDG&E Borrego Substation - Proposed Expansion Area	29
Figure 4	Surrounding Land Uses	75
Figure 5	Existing Views of Surrounding Land Uses.....	77
Figure 6	Existing Views of Surrounding Land Uses.....	79
Figure 7	Existing General Plan Land Use Designations / BVALUCP Review Areas	99

1.0 Executive Summary

The Project proposes construction of a photovoltaic (PV) solar energy electrical generation facility to provide electricity for public consumption. The land areas that comprise the Project site are located just east of the community of Borrego Springs, California, within northeastern San Diego County.

The lands that would be developed with the PV solar panels (approximately 341 acres total) is comprised of two main parcels (or portions thereof), with additional lands affected to support the transmission of power generated to the existing Borrego Substation, presently owned and operated by San Diego Gas and Electric (SDG&E). The proposed facilities would have an overall capacity of 35-40 Mega Watts (MW), a portion of which would serve the Borrego Valley area, with the remaining electricity being sold for distribution elsewhere. Each facility would consist of an array of PV solar panels, supported on a galvanized metal racking system. Other Project components include two onsite substations, racking, panel interconnections, inverters, transformers, and switching gear, as well as transmission facilities (i.e., utility lines and poles) to allow for the transfer of energy to the Borrego Substation for distribution.

A number of existing and proposed plans and regulations apply to the lands affected by the Project. As determined in the following Land Use Compatibility Analysis, the Project is considered to be consistent with all applicable goals, policies, and objectives contained within such documents, as well as with other applicable regulations, such as the County's Wildland Urban Interface Ordinance. The Project does not propose a change to the existing General Plan land use or zoning designations, and is an allowed use under the existing designations with approval of a Major Use Permit (MUP), thereby demonstrating consistency with the land use intended by the County for the affected properties. In addition, due to the nature of the Project location and existing character of other uses and undeveloped lands in the Project area, short-term construction and long-term operation of the Project are considered to be compatible with surrounding land uses.

2.0 Introduction

2.1 Project Location

The land areas that comprise the Project site are located just east of the community of Borrego Springs, California, within northeastern San Diego County; refer to Figure 1, Regional / Local Vicinity Map, and Figure 2, Aerial Photograph. The land that would be developed with the PV solar panels (approximately 341 acres) is comprised of two main parcels, with additional lands affected to support the transmission of power generated to the existing Borrego Substation, located just east of Borrego Valley Road. The County Assessor Parcel Numbers (APNs) that comprise the Project area for the main facilities include APN 141-230-26 (approximately 288 acres) and a portion of APN 141-230-33. Parcel 141-230-33 totals approximately 104 acres; however, only approximately 53 acres of this parcel would be included in the Project. The remaining (approximately) 51 acres would remain undisturbed and would not be leased by the Project proponent. The 53-acre portion included in the Project would be leased by EE Borrego Land, LLC, or an affiliated company, from the County of San Diego, Department of Public Works, Airport Division to support the intended facilities; refer to Figure 2, Aerial Photograph. EE Borrego Land, LLC, currently has purchase options on APN 141-230-26 and an executed option to negotiate a final lease agreement with the County of San Diego, the owner of APN 141-230-33. Palm Canyon Drive runs east-west to the south of the two parcels, with Borrego Valley Road running just west of the existing Borrego Substation. The Borrego Valley Airport borders the southern border of the approximate 53-acre-lease area.

2.2 Project Description

The Project would involve the construction of a solar energy electrical generation facility to provide electricity for public consumption. The proposed facilities would have an overall capacity of 35-40 MW, a portion of which will serve the Borrego Valley area, with the remaining electricity being sold for distribution elsewhere. The Project would consist of solar generation facilities on each of the 288-acre parcel and 53-acre-lease parcel. Each facility would consist of an array of solar PV panels, supported on a galvanized metal racking system; refer to Figures 3A and 3B, Major Use Permit Plot Plan, and Figure 3C, Major Use Permit Plot Plan – Elevations/Details. A number of

solar panels may also be installed on the 53-acre-lease parcel to provide electricity directly to the Borrego Valley Airport. These panels would be directly connected to the Airport electrical system if their installation was economically and technically viable. Improvements would also be made to the existing Borrego Substation to facilitate transmission of the energy produced.

The photovoltaic panels would be manufactured at an offsite location and transported to the Project site. ~~The panels would be made of a thin-film amorphous silicon material covering a glass pane and would be black in color and highly absorptive.~~ All panels would be solar glass with an anti-reflective (AR) coating to minimize the potential for glare and/or reflection of sunlight, and would be black in color and highly absorptive; refer to Figure 3D, Typical PV Solar Layout. The panels would not contain cadmium or cadmium compounds.

The panel arrays would be oriented along an east-west axis with the panels facing generally to the south. The panels would be ~~racks,~~rack mounted in a two-panel system (one panel mounted above a second panel), measuring approximately 10 to 14 feet in total combined width; refer to Figure 3C, Major Use Permit Plot Plan – Elevations/Details. As such, the total height of the two-panel system measured from ground surface would be approximately eight to ten feet. ~~It should be noted that a three-panel system may be utilized for the Project. Project design will be determined during~~ During final engineering and design, a two- or three-panel design may be used depending upon the availability of panels within the market. The height of the panels would be determined during final engineering and would also be based on the design requirements of the Borrego Valley Management Plan design and construction criteria. The distance from the ground to the top of the panel system would not exceed a maximum height of 10 feet. The panels would be tilted at an approximate 30 degree angle, or as otherwise determined necessary during final Project design, and would therefore be fixed and non-tracking.

The length of each row of panels would be approximately 300 feet along the east/west axis. Beam separation along the row would range from approximately 8 to 14 feet. Spacing between each row along the vertical axis would be approximately 19 to 24 feet center to center. The ultimate arrangement/number of PV solar panels, spacing of supporting racks, and rack pilings are shown in Figures 3B and 3C to illustrate the general configuration of the proposed solar collection system and are subject to modification at final engineering design. A north-south running access road, of minimum 24-foot width and unsurfaced, would be provided approximately every 300

feet between the horizontal rows (approximately 150 feet to either side), per design requirements of the Borrego Springs Fire Protection District.

2.2.1 Racking

Racking refers to the structure that holds the solar PV panels in the proper position for maximum capture of solar energy. For the Project, a combination of galvanized I-beam steel posts or tubular steel posts and channel steel would be used.

2.2.2 Panel Interconnections, Inverters, Distributed Transformers and Switch Gear

Panel arrays would be electrically connected into panel strings using wiring attached to the racking. Panel strings would be electrically connected to each other via underground wiring. Wire depths would be in accordance with local, State, and Federal codes. Gathering lines would connect individual panel array strings to one or more inverters/transformers and combiner boxes. Wiring from the panel strings would be connected to combiner boxes. Electrical current would then be transferred to the inverters which would convert the Direct Current (DC) produced by the PV panels into Alternating Current (AC). A pad-mounted transformer next to the inverter would increase the voltage. The AC would then travel through underground gathering lines to a common utility interconnection point or Project substations.

2.2.3 Project Substations and System Interconnection Points

The Project design includes construction of two onsite substations; refer to Figures 3A and 3B, Major Use Permit Plot Plan. One substation would be located in the northwest corner of the 288-acre parcel. A second substation is proposed at the northwest corner of the approximately 53-acre lease parcel (APN 141-230-33).

The proposed substations would include transformers, breakers, switches, meters, and related equipment. Each substation would also contain a control room approximately 12 by 20 feet with an overall height of less than 15 feet. The overall footprint of each Project substation would be approximately 150 feet by 90 feet, with various supporting equipment installed within this footprint. Overall height of the substations would be approximately 35 feet in height at the apex.

2.2.4 Inverter Enclosures

Approximately 38 small-scale, aboveground structures would be constructed within the solar panel fields to weatherize inverter/distributor transformers and switching gear. These structures would be approximately 12 feet by 26.5 feet in size, and 12 feet in height at the apex, and constructed on a level concrete building pad; refer to Figure 3C, Major Use Permit Plot Plan – Elevations/Details. The structures would be constructed of non-flammable materials (i.e., steel) with a metal roof. Each structure would be designed with screened ventilation provided on the roof to allow for the circulation of air for cooling purposes. The AC generated would be transferred from the inverters via underground gathering lines to the Project substations.

2.2.5 Transmission Facilities

Two options are available for transferring the energy generated from the solar energy facility. The northern transmission route would be constructed within an existing 20-foot SDG&E-owned utility right-of-way which extends from the Borrego Substation eastward to the 288-acre parcel and a 200-foot arc. The southern transmission route would run underground south from the 53-acre lease parcel to an existing transmission line located along Palm Canyon Drive. The route would then travel west aboveground to Borrego Valley Road, then north to the existing Borrego Substation; refer also to Figure 2, Aerial Photograph, and to the MUP Plot Plan, Sheet One.

Northern Transmission Route

For the northern transmission route, one new 69kV and one new 12 kV transmission line would be installed within an existing 20-foot SDG&E utility right-of-way that runs along the southern boundary of several adjacent parcels to the west (Sections 26 and 27) and includes a 200- foot arc of land extending southwest from the intersection of Sections 26, 27, 34, and 35. The 12kV line would run underneath the 69 kV line. The poles would be approximately 50 feet in height and spaced approximately 250 feet apart. The transmission lines would extend westward aboveground for approximately one mile from the Project substation on the 288-acre parcel to the Borrego Substation.

Pole installation for the northern route would be accomplished by advancement of holes into the soil using a truck-mounted auger. Poles would then be raised to the vertical position and lowered into place. Alternatively, cement foundations would be installed and steel poles would be permanently affixed to the cement foundations.

Stringing of the conductor (wires) would be accomplished by first attaching rollers to the lower end of the pole insulators. The rollers would allow the individual conductors to be pulled through each structure until the conductors are ready to be pulled to the final tension position. Crews would access each pole by pick-up truck and/or bucket truck along the easement right-of-way. Lay down areas for equipment would be identified prior to commencing construction activities to ensure that no unplanned grading or vegetation removal is required. Conductor pull and tension sites would be located at both the Project site and the Borrego Substation. The pull and tension sites would be approximately 40 feet wide by 100 feet long.

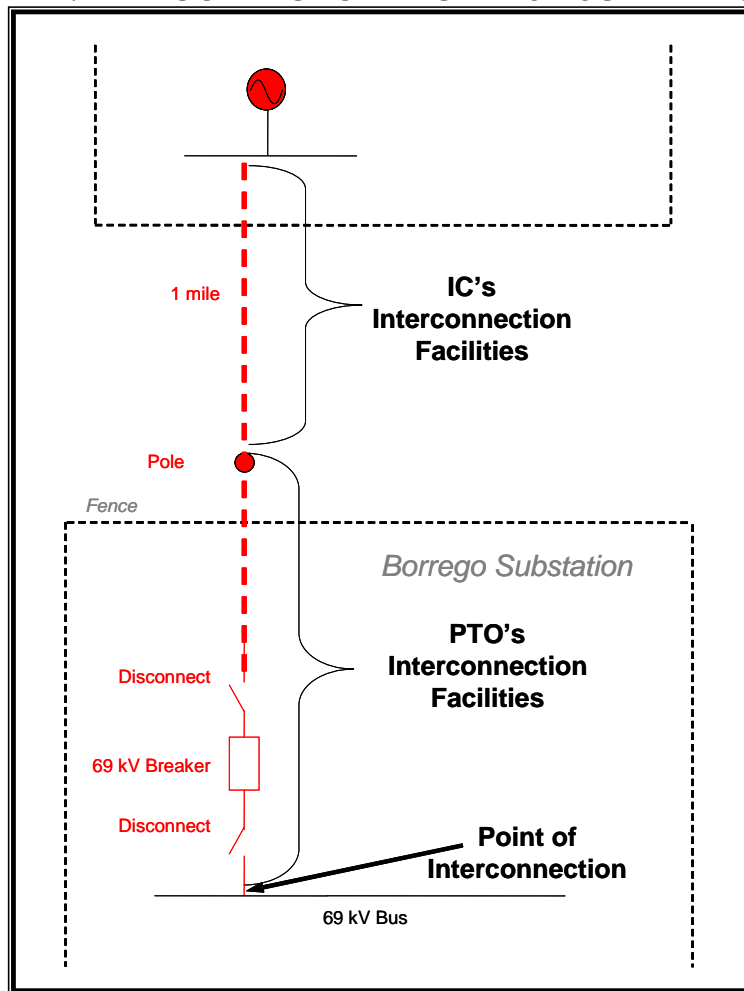
After the conductors are pulled into place, wire or conductor sags would be adjusted to a pre-calculated level. Vibration dampers and other accessories would then be installed, as needed. Conductors would be transported to the Project site via reel trailers with reel stands.

Northern Transmission Line Ownership

Selection of the northern transmission route would require the applicant to obtain easement agreements from SDG&E and/or the property owners of the adjacent lands. The “interconnection facilities” are defined as the facilities and equipment owned, controlled, or operated by SDG&E from the Point of Interconnection to the Point of Change of Ownership; refer to Diagram A, below. The Point of Interconnection would occur at the 69 kV bus in the Borrego Substation and the existing 12kV rack (busbar). All Project-installed transmission facilities would be under the ownership of SDG&E.

As the transmission facilities along the northern route would not be under the ownership of EE Borrego Land, LLC, as they are not considered as part of the MUP application; however, the lands affected by the proposed transmission facilities along the northern route must be included in the environmental analysis conducted for the Project to address potential impacts and provide mitigation, as appropriate, consistent with CEQA requirements.

DIAGRAM A: INTERCONNECTION FACILITIES – SCHEMATIC LAYOUT



Southern Transmission Route

For the southern transmission route, one new 69kV line and one new 12 kV transmission line would be installed underground within an easement running from the proposed substation on the 53-acre-lease parcel southward approximately 0.25 mile to Palm Canyon Drive. The easement would be located within the existing access road, west of the Borrego Valley Airport Building Restriction Line (BRL). The lines would then run west aboveground for approximately one mile to the intersection of Palm Canyon Drive and Borrego Valley Road. The 69 kV line would be installed on top of the existing poles, with the existing 12 kV line and the new 12 kV line installed underneath. To accommodate these lines, the existing poles along Palm Canyon Drive would be removed and replaced with new poles approximately 45 feet in height.

Spacing of the new poles would remain similar to that which presently exists (approximately 235 feet apart).

From the intersection of Palm Canyon Drive and Borrego Valley Road, the lines would then run north along the east side of Borrego Valley Road for approximately one mile to the Borrego Substation where a connection to the existing facilities would occur. To accommodate the new transmission lines, the existing poles (approximately 40 feet in height) would be extended five feet. The poles would then support the new 69 kV and 12 kV lines associated with the Project, along with the existing 69 kV line and two 12 kV lines that are present. The existing poles along Borrego Valley Road are spaced approximately 170 feet apart.

Pole installation for the southern transmission route would be accomplished by using methods similar to those used for the northern route. Trenching would be required to underground the transmission lines from the 53-acre lease parcel to Palm Canyon Drive. The aboveground portion of the transmission route along Palm Canyon Drive and Borrego Valley Road would require installation of new poles immediately next to the existing poles which would then be removed.

Stringing and pulling of the conductor would occur in a manner similar to that described above for the northern transmission route. Lay down areas for equipment would be identified prior to commencing construction activities to ensure that no unplanned disturbance or vegetation removal is required.

Southern Transmission Line Ownership

Similar to the transmission facilities along the northern route, the offsite transmission facilities along the southern transmission route would be owned by SDG&E. As such, these facilities would not be under the ownership of EE Borrego Land, LLC, or its affiliates and are therefore not considered as part of the MUP application; however, the lands affected by the proposed transmission facilities along the southern route have been included in the environmental analysis conducted for the Project to address potential impacts and provide mitigation, as appropriate, consistent with CEQA requirements.

Telecommunication Facilities

Telecommunication lines would be installed from the facility to the Borrego Substation to allow for supervisory control and data acquisition (SCADA) between the Borrego Valley Substation and the Project. Telecommunication lines would also be placed underground southwards to access telecommunication lines located along either

Borrego Valley Road or Palm Canyon Drive to allow remote monitoring and communication.

The Project would also require up to four meteorological data collection systems, two for each point of interconnection. The systems would be mounted at various locations onsite and would collect data pertaining to global horizon irradiance, ambient temperature, PV back panel temperature, wind speed and direction, precipitation, barometric pressure, relative humidity, and visibility, among other information.

2.2.6 Improvements at the Existing Borrego Substation

The Project would require limited improvements at the existing Borrego Substation to allow for the transmission of electrical power. These improvements would occur within a portion of an approximately 0.82-acre expansion area (approximately 100-130 feet wide by 200 feet in length) to the south of the existing Borrego Substation facilities and adjacent to Borrego Valley Road; refer to Figure 3E, SDG&E Borrego Substation – Proposed Expansion Area. Project improvements would occur within the “69kV equipment area,” located within the overall 0.82-acre expansion area.

Interconnection facilities to be installed with the Project within the 69kV equipment area include one pole (to be located outside of the Borrego Substation fence); conductor and insulators from the pole to a new 69kV termination rack (busbar) to be placed within the 69kV equipment area; two breakers; two disconnect switches; and, associated protection and control equipment for security purposes. An 8-foot chain-link fence topped with 3-strand barb wire would be installed along the perimeter of the expansion area. Breakaway fencing would be used around the exterior perimeter of the 288-acre parcel, 53-acre lease parcel, and the proposed expansion area, with exception of the existing fencing that runs along the northern boundary of the Borrego Airport property, pursuant to the BVFMR for Light Density classification (Project as designated in the BVFMR). Proposed structures and perimeter fencing will not block more than 50 percent of the calculated regime width (see Section 3.1.1 San Diego General Plan - Open Space Element, below, for additional discussion); refer also to Figure 3E, SDG&E Borrego Substation – Proposed Expansion Area.

Substation Ownership

The Borrego Valley Substation is presently owned and operated by SDG&E. All modifications to the Substation would be owned by SDG&E, and the offsite transmission facilities along the southern transmission route would be owned by SDG&E, as noted above. As such, these facilities would not be under the ownership of EE Borrego Land, LLC, or its affiliates, and are therefore not considered as part of the MUP application; however, construction and operation of the proposed transmission facilities have been included in the CEQA analysis.

2.2.7 Grading

As stated above, the solar PV panels would be installed in an east-west orientation in parallel rows; refer to Figure 3D, Typical PV Solar Layout. Although the majority of land surface on the two affected parcels is generally flat, limited portions of the 288-acre parcel and the 53-acre lease parcel would be graded to provide a ground surface that can adequately accommodate the PV solar panels. Grading on these two parcels would require an estimated 107,000 cubic yards (c.y.) of balanced cut and fill. The remainder of these two parcels would be cleared and grubbed to allow for installation of the panels and associated facilities.

Limited clearing and grubbing would be required for the expansion area at the Borrego Substation site. Grading is estimated to range between approximately 300 to 800 c.y. of balanced cut and fill over the 0.82-acre area to create a level building pad for installation of the proposed facilities. Variation in grading quantities for the expansion area is due to whether the facilities would be constructed on a building platform raised on piers, or on the ground surface (building pad one foot above 100-year flood line).

In order to control potential dust and erosion during the life of the Project, a non-toxic, biodegradable, permeable soil-binding agent or permeable rock material will be applied to all disturbed or exposed surface areas as follows: a) A permeable soil-binding agent suitable for both traffic and non-traffic areas shall be used. These agents shall be biodegradable, eco-safe, with liquid copolymers that stabilize and solidify soils or aggregates and facilitate dust suppression; or, b) Alternatively, a permeable rock material consisting of either river stone decomposed granite or gravel could be placed in a thin cover over all exposed surface area in-lieu of the binding agent referenced above. In-lieu of, or in combination with a) and b) above, the areas located between the arrays, and any non-drivable surface may be revegetated with native noninvasive plant species.

The soil-binding agent would be reapplied approximately every two years for maintenance purposes. ~~The binding agents would be suitable for both traffic and non-traffic areas. Binding agents such as PolyPavement require a single initial application and periodic maintenance every 2-3 years. These agents are biodegradable, eco-safe, liquid copolymers that stabilize and solidify soils or aggregates and facilitate dust suppression. Once applied to the soil, the copolymer molecules coalesce forming bonds between the soil particles. These materials are commonly used on non-paved service roads, golf course paths, dirt bike tracks, helicopter landing areas, etc. Alternatively, a permeable rock material consisting of either river stone decomposed granite or gravel would be placed in a thin cover over all exposed surface areas for the purposes of dust and erosion control.~~

2.2.8 Lighting

Limited Project lighting would be installed to allow for ongoing maintenance and security. Low-level lighting would be installed at the main entry gate to the 53-acre lease parcel, as well as at each of the substations. Lighting would be placed on poles of 15 feet or less in height or attached directly onto the exterior wall of the structure and would be 200 watts or less (total combined per each location). Low-level lighting would also be installed at the main entry gate to the expansion area to facilitate access.

All Project lighting would be operated manually or activated via motion sensors. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent ownerships and/or open space lands. All lighting would conform to County of San Diego outdoor lighting requirements.

2.2.9 Signage

Minimal Project signage is proposed to allow for the identification of the Project owner and for safety and security purposes. Signage is proposed to be installed on the fence in the vicinity of the main entry gates of the 53-acre-lease parcel. Signage would identify the Project operator and owner as EE Borrego Land, LLC, and would provide emergency contact information. All signage would conform to County of San Diego signage requirements for the applicable zone. No freestanding signage is proposed as part of the Project.

In addition, small-scale signage would be posted at the main entry gates, as well as intermittently along the perimeter fencing on all exterior parcel boundaries, to indicate

“No Trespassing” and “Private Property” for security purposes (does not include the shared boundary between the southerly 53-acre-lease parcel and the northerly 288-acre parcel), as allowed by County regulations.

2.2.10 Access / Circulation

Construction Access

All materials for Project construction would be delivered to the sites by truck. The majority of truck traffic would occur on designated truck routes and/or major streets (i.e., Palm Canyon Drive and Borrego Valley Road). Traffic resulting from construction activities would be temporary and may occur along area roadways as workers and materials are transported to and from the Project area.

Long-Term Access

Long-term access to the 53-acre lease/288-acre parcels would be provided from Palm Canyon Drive via an existing access road that extends north to the western boundary of the 53-acre lease parcel. The Project applicant has entered into an Option to Lease and Access Agreement with the County of San Diego Department of Public Works (Airports) which will allow for long-term access rights across the Borrego Valley Airport property on an as-needed basis. Project-related vehicles will briefly cross the Airport Approach/Departure Zone to access the Project. The existing access road ranges from 12 to 16 feet in width and is surfaced with decomposed granite (d.g.). County Airports and the Borrego Springs Fire Protection District have indicated that the existing access road will provide adequate emergency access to the Project site, and no additional improvements are required or proposed.

Interior access to the main Project site would be provided by a looped 24-foot wide perimeter road. This road would be all-weather and surfaced with decomposed granite and would be maintained to provide a fire buffer as well as to facilitate onsite circulation for emergency vehicles. In addition, a system of internal roadways, approximately 24 feet in width and unsurfaced, would be provided on the 53-acre lease parcel and 288-acre parcel along the north-south access approximately every 300 feet between the east-west oriented rows of PV solar panels (approximately 150 feet to either side).

Borrego Valley Road runs adjacent to the west of the existing Borrego Substation. The roadway is a two-lane surfaced roadway and provides access to the east-west SDG&E

transmission easement (northern transmission route). No improvements are proposed to Borrego Valley Road or to the existing easement to provide access to the proposed (future) transmission facilities.

Access to the proposed expansion area at Borrego Substation would be from Borrego Valley Road via the existing gravel driveway. A portion of the existing perimeter fencing would be removed along the southern boundary of the Borrego Substation facilities and a gate installed to provide access to the expansion area; refer to Figure 3E, SDG&E Borrego Substation – Proposed Expansion Area.

2.2.11 Project Schedule / Phasing

The Project may be implemented in several phases. The sequence for development of the two parcels would largely be influenced by contractual agreements and the interconnection between each of the phases and the existing and proposed transmission facilities at the time construction of each phase commences. With consideration for anticipated phasing of the Project, construction is expected to begin by fall of 2010. The proposed facilities are expected to be operational in 2011.

It is anticipated that overall construction of the Project would take approximately 10 months to complete, with crews working six days per week, 10 or more hours per day. Up to 150 employees would be working onsite at the peak of construction. Local labor would be utilized to the extent possible. It is estimated that approximately 30% of the labor force may be obtained locally.

Depending on local permit requirements, some activities may occur during evening, night, and/or weekend hours, due to the scheduling of system outages and/or construction needs. Construction would commence following County of San Diego approval of permits and other entitlements, final engineering, and procurement activities.

2.2.12 Trails

The Project design includes provision of easements to allow for future construction of recreational trails, consistent with County requirements. Pursuant to the adopted Borrego Springs Community Trails and Pathways Plan, the Project proposes dedication of a 15-foot trail easement along the northern and western boundary of the 288-acre parcel to allow for future construction of a trail. The Project does not propose to provide improvements for trail construction at either of these locations at this time. In

addition, the Project Proponent has received a letter from County Department of Parks and Recreation (dated November 18, 2009), indicating that no trail improvements or easement dedications are required within the Palm Canyon Drive right-of-way.

2.3 General Plan Land Use and Zoning Designations

General Plan land use designations and zoning for the affected parcels are given in Tables 1 and 2, below. No changes to either the existing General Plan land use or zoning are proposed with the Project.

**TABLE 1
EXISTING GENERAL PLAN LAND USE / REGIONAL CATEGORY**

Assessor Parcel Number	Approximate Acreage	General Plan Land Use Designation	Regional Category
141-230-26	288	(18) Multiple Rural Use	Rural Development Area (RDA)
141-230-33	104*	(18) Multiple Rural Use	Country Town (CT)
141-210-01 (Borrego Substation)	5	(18) Multiple Rural Use	Rural Development Area (RDA)

* The Project would be limited to 53 acres of the 104-acre parcel.

**TABLE 2
EXISTING ZONING**

Assessor Parcel Number	Approximate Acreage	Zoning
141-230-26	288	General Rural Use (S92)
141-230-33	104*	Rural Residential (RR.25)
141-210-01 (Borrego Substation)	5	General Rural Use (S92)

* The Project would be limited to 53 acres of the 104-acre parcel.

2.4 Surrounding Land Uses

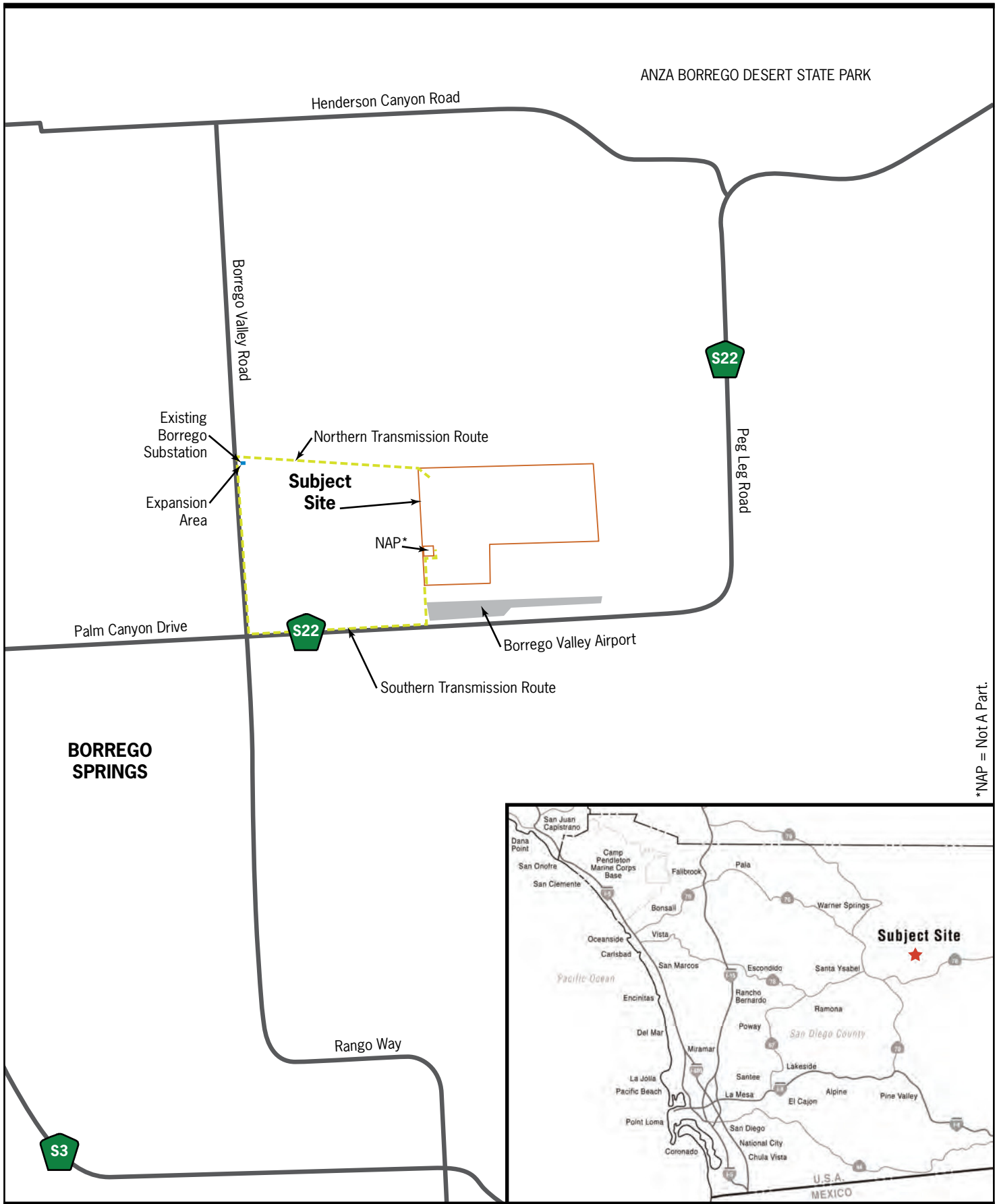
The Project area is located in the Borrego Valley, which is in the desert region of northeastern San Diego County. The Anza-Borrego Desert area is part of the larger Colorado Desert. The Borrego Sink is located approximately four miles southeast of the Project area, and the Borrego Badlands are approximately five miles to the east.

The 53-acre-lease parcel is bordered on the north by the 288-acre parcel. To the north and east of these parcels is undeveloped land; to the south is the Borrego Valley Airport; to the west are a commercial palm nursery, and a small-scale commercial sand and gravel yard. A microwave tower is also adjacent to the southwest corner of the 288-acre parcel.

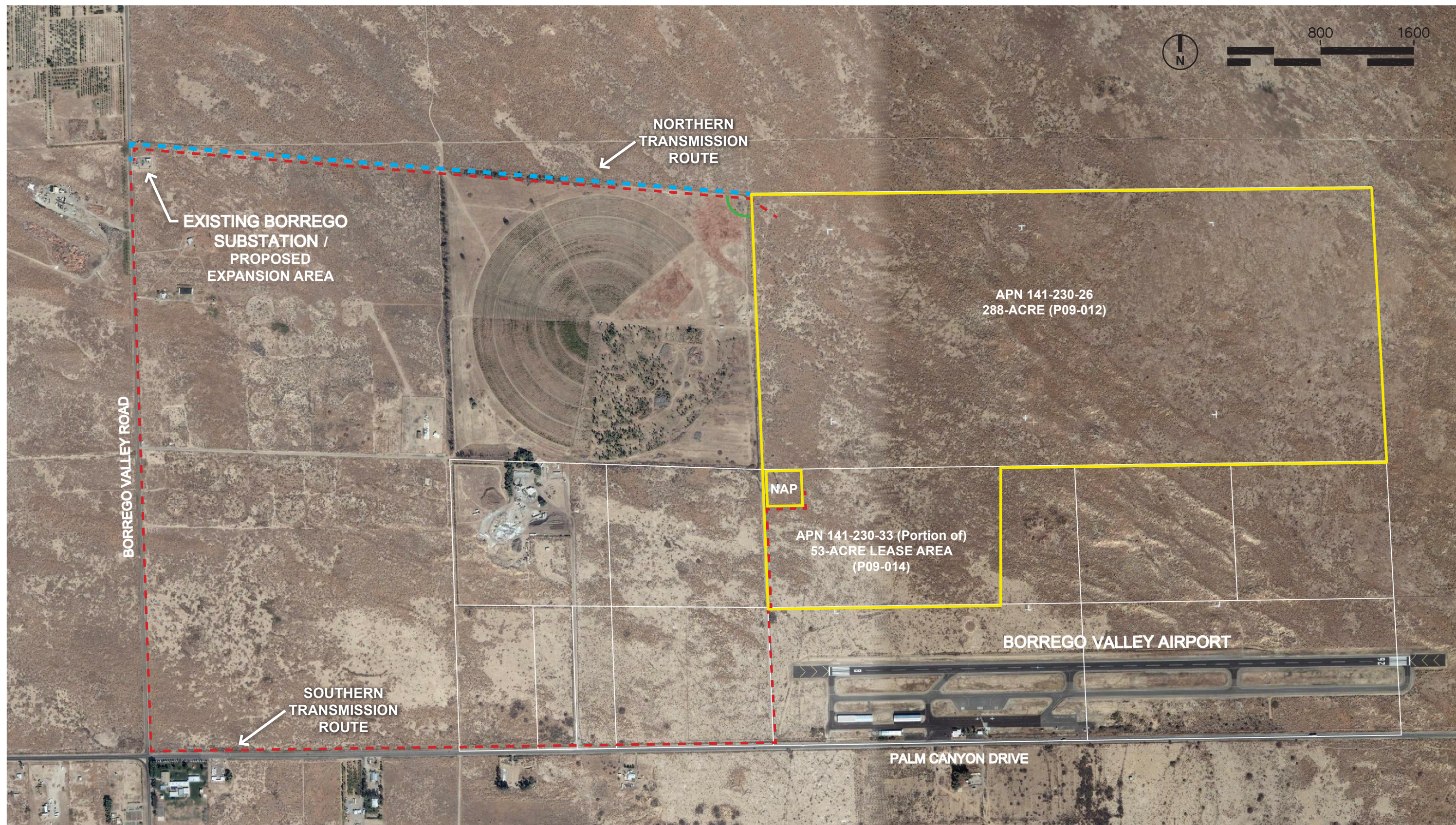
Land uses to the south across Palm Canyon Drive generally include undeveloped lands interspersed with industrial type and residential uses. Refer also to Figure 2, Aerial Photograph.

The Borrego Substation is bordered to the west by Borrego Valley Road. Immediately adjacent to the north, east, and south are undeveloped lands. Further to the southeast and south are several single-family homes with intervening undeveloped/unimproved lands. Further west, across Borrego Valley Road, are agricultural-related facilities, and to the northwest are active agricultural lands.

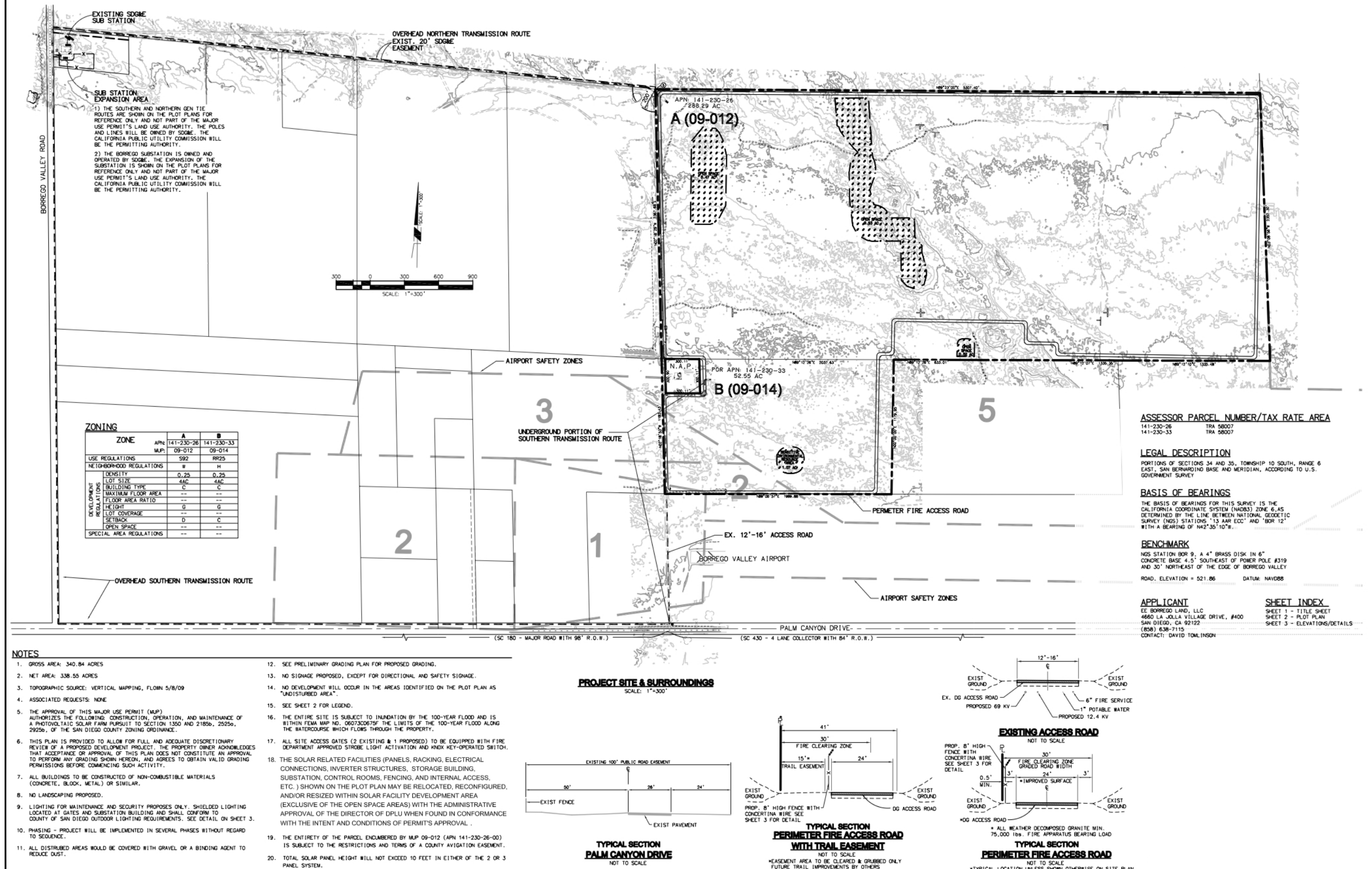
THIS PAGE INTENTIONALLY LEFT BLANK.

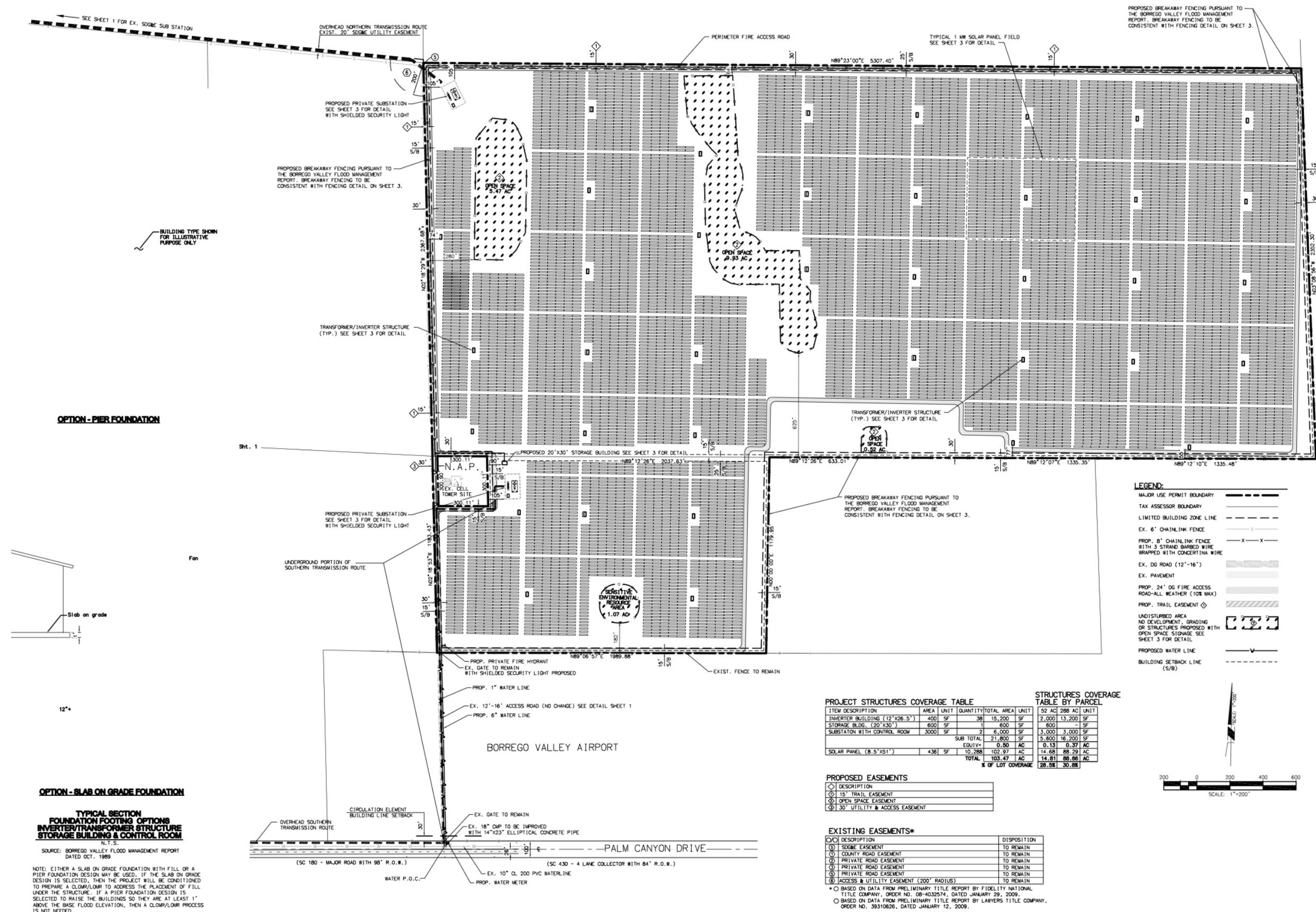


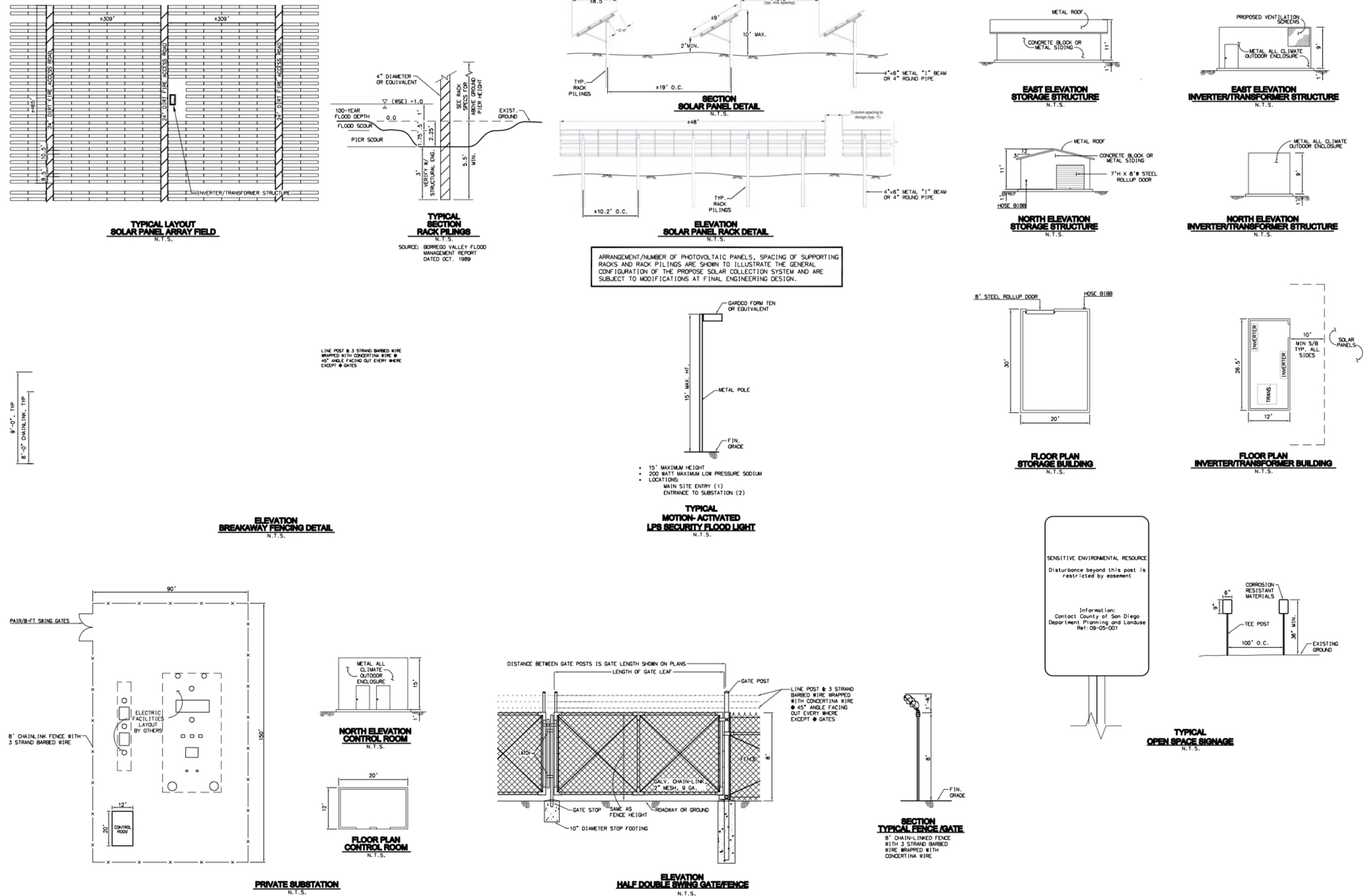
*NAP = Not A Part.



Source: Eagle Aerial, 2008.

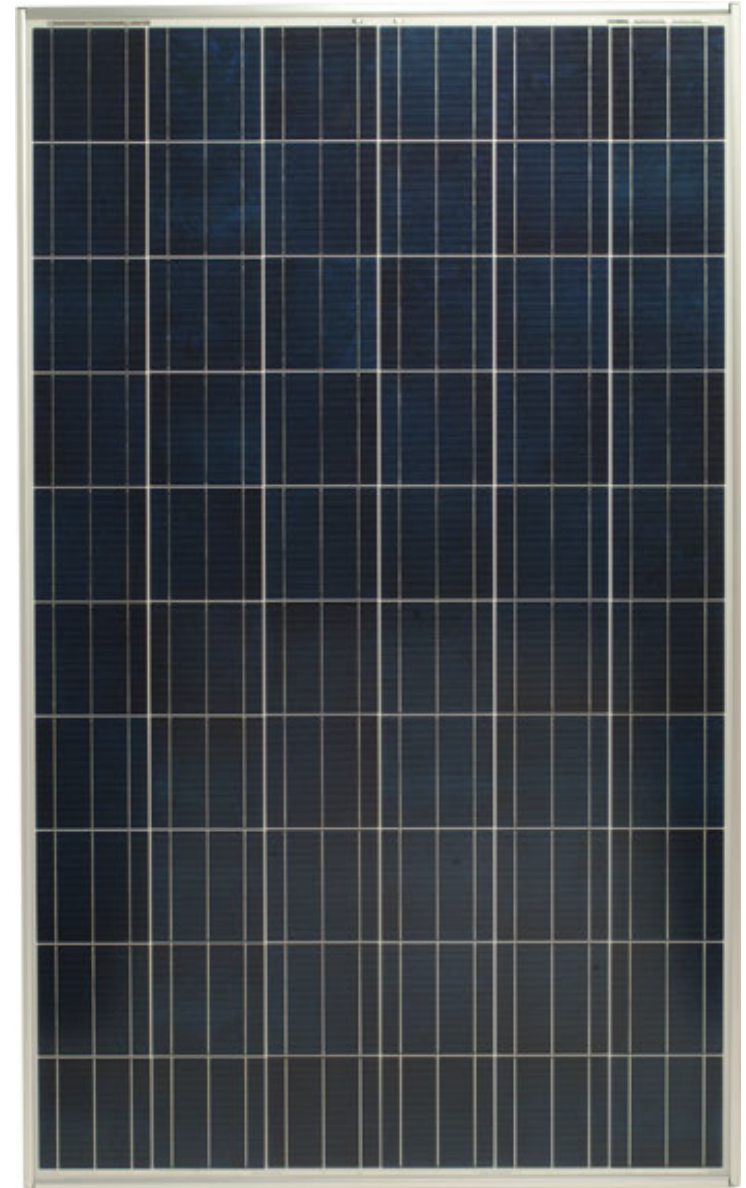




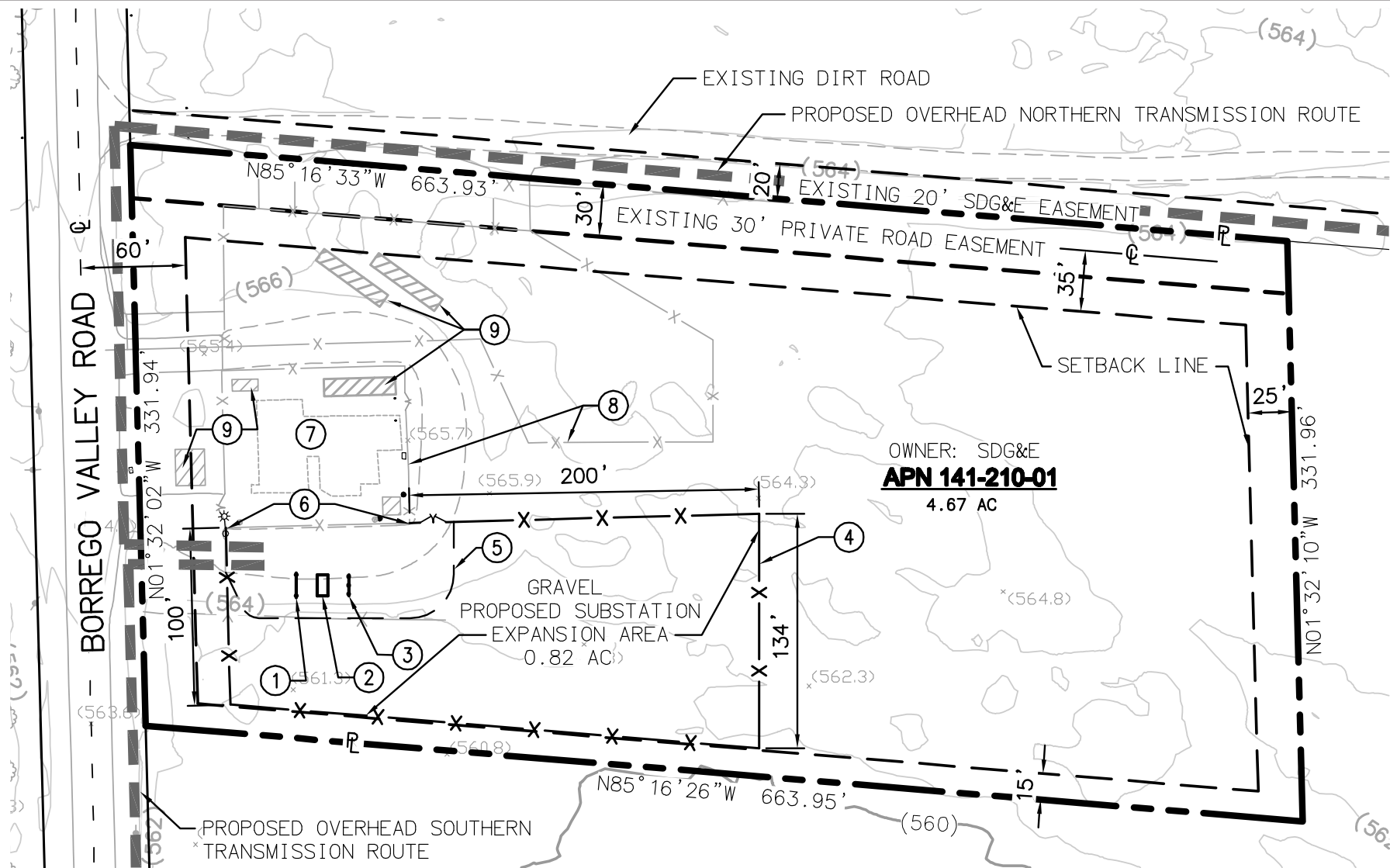




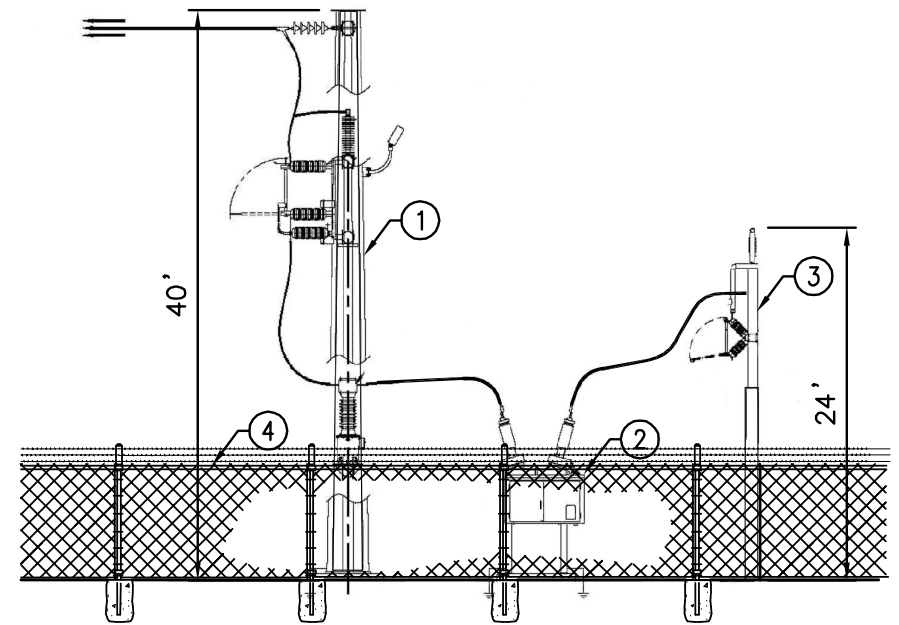
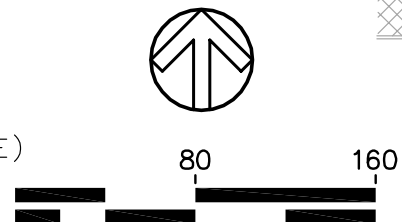
Typical Solar Panel Array Field Layout



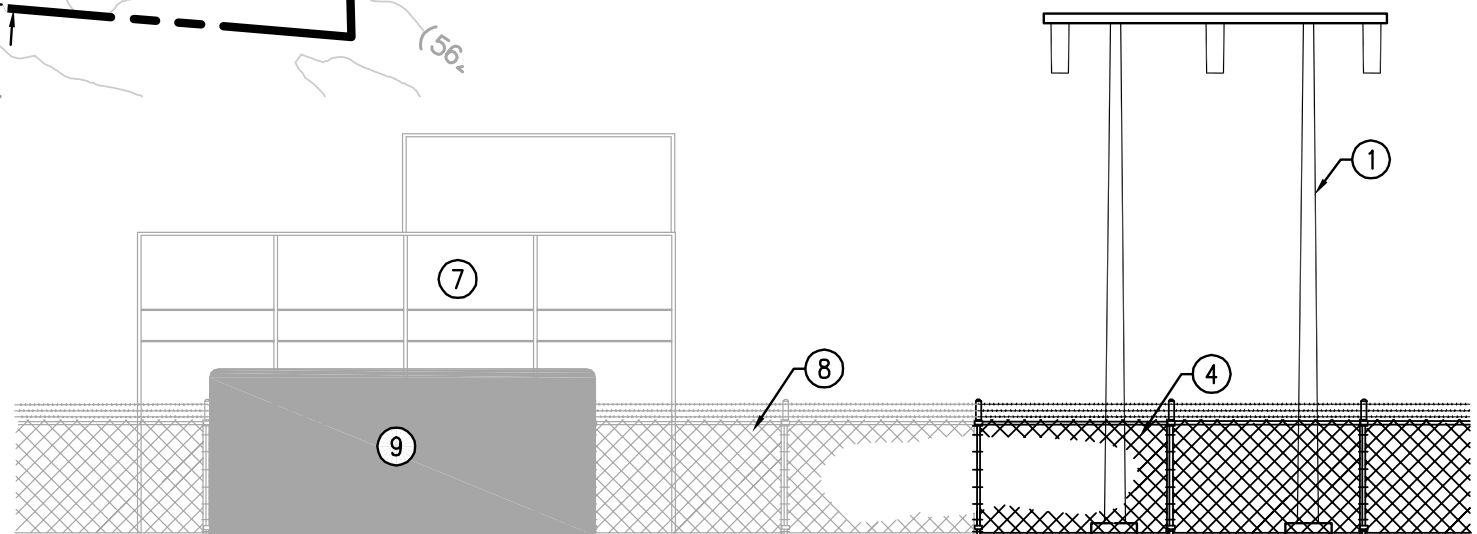
Thin Film Panel



- ① DEAD END STRUCTURE
(69kV HIGH VOLTAGE RACK WITH DISCONNECT SWITCH)
- ② HIGH VOLTAGE BREAKER
- ③ BUSBAR STRUCTURE (WITH DISCONNECT SWITCH)
- ④ PROPOSED 8' CHAINLINK BREAKAWAY FENCE WITH
3 STRAND BARB WIRE
- ⑤ PROPOSED 69 kV EQUIPMENT AREA
- ⑥ PORTION OF EXISTING FENCE TO BE REMOVED
- ⑦ EXISTING SDG&E SUBSTATION EQUIPMENT
- ⑧ EXISTING CHAINLINK FENCE (PORTION OF BREAKAWAY FENCE)
- ⑨ EXISTING STRUCTURE



SOUTH ELEVATION
SCALE: NTS



WEST ELEVATION
SCALE: NTS

3.0 Plan Consistency Analysis

The Project is compatible with neighboring land uses at its proposed location and is fully consistent with applicable County General Plan and Subregional Plan policies and County Zoning Ordinance provisions. Following is an analysis of Project plan consistency, as well as a summary of findings required under the Zoning Ordinance.

3.1 General and Subregional Plan Consistency

Several adopted plan policies support and promote the development of the Project at its proposed location. The Project is found to be consistent with the following adopted or proposed plans: the existing County General Plan and the Desert Subregional Plan; and, the Borrego Valley Airport Land Use Compatibility Plan (BVALUCP).

3.1.1 San Diego County General Plan

The County of San Diego General Plan is intended to provide guidance for the long-term development of San Diego County. The General Plan includes various Elements that address different aspects of growth, including accommodating population growth and housing needs, while influencing the distribution of development in order to protect scarce resources wisely; preserving the natural environment; providing adequate public facilities and services efficiently and equitably; assisting the private sector in the provision of adequate, affordable housing; and, promoting the economic and social welfare of the region. Goals, policies and objectives are provided within each of the Elements to guide future land development and ensure consistency with the County's intended vision for the future of San Diego County. A brief discussion of Project conformance with several of these goals and policies is provided below. The following analysis discusses specific General Plan goals and policies with regard to the Project as proposed.

According to research conducted with the County of San Diego DPLU, the 53-acre-lease parcel, 288-acre parcel, and the 5-acre parcel on which the Borrego Substation is located are designated as (18) Multiple Rural Use on the County of San Diego General Plan Land Use Plan; refer to Table 1, Existing General Plan Land Use / Regional Category. The Multiple Rural Use designation is applied "in areas with one or more of the following characteristics: not highly suited for intensive agriculture; rugged terrain;

watershed; desert lands; and, other environmentally constrained areas. Other than a single-family home on an existing lot, it is not intended that any development occur unless the proposed development has been carefully examined to assure that there would be no significant adverse environmental impacts, erosion and fire problems would be minimal, and no urban levels of service would be required.” The proposed use is therefore consistent with the existing land use designations, and would not require an amendment to the General Plan.

Part I

Open Space Element:

It is not the intent of the Open Space Element Categories and Goals to restrict or regulate privately owned land in any way except as is necessary to facilitate the public health, safety, and welfare.

Floodplains

Goal I. Health and Safety

1. Protect life and property by regulating uses in areas subject to flooding.
2. Reduce the need for construction of major flood control improvements.

The Project would be consistent with the above-stated Goals of the Open Space Element. The Flood Hazard Map for Borrego Valley Alluvial Fans shows that the Project site lies along the valley floor of the Coyote Canyon alluvial fan within the Borrego Valley. Alluvial fans typically occur in arid environments where steep mountains encounter a flat valley floor. These areas experience infrequent but intense storms. This combination of topography and climate tends to produce flash floods yielding high sediment loads along the steep mountainside, while channel braiding and sediment deposition occur along the gentle slopes of the valley floor.

Coyote Creek has a total drainage area of approximately 144 mi². The 100-year flow rate at the apex of the Coyote Creek alluvial fan is approximately 23,200 cubic feet per second (cfs). This flow is either distributed among shallow alluvial channels or sheet flows across the width of the alluvial fan. A portion of this flow travels across the affected Project sites from northwest to southeast at a slope of approximately 0.8%. The Federal Emergency Management Agency (FEMA) has prepared Flood Insurance

Studies (FIS) identifying alluvial fans with calculated depths and velocities. These depth-velocity lines represent the velocity and depth that are likely to occur during a 100-year storm within a theoretical alluvial channel of a certain calculated width, which is dependent on the distance from the alluvial fan apex. The velocity for the affected parcels is 4.5 feet per second, and flow depth is one foot.

RBF reviewed the findings of the Borrego Valley Flood Management Report (BVFMR), prepared by Boyle Engineering Corporation in October 1989. The BVFMR provides guidelines for development within the Borrego Valley to minimize adverse effects with regard to flooding potential. The Project considers these guidelines and incorporates design measures in order to minimize the effects of flooding and erosion and to increase building safety.

Breakaway fencing would be used around the exterior perimeter of the 288-acre parcel, 53-acre lease parcel, and the proposed expansion area, with exception of the existing fencing that runs along the northern boundary of the Borrego Airport property, pursuant to the BVFMR for Light Density classification (Project as designated in the BVFMR). Proposed structures and perimeter fencing will not block more than 50 percent of the calculated regime width. Such fencing would eliminate the potential for debris to collect along the fence and further impede water flows if it were to remain vertical during a flood event.

The Project proposes solar PV panels aligned along an east-west axis on piers or “I” beams; enclosed structures for inverters and transformers; two onsite substations; and, one onsite storage shed within the 100-year flood hazard area. In addition, improvements at the 69kV equipment area would include one pole (to be located outside of the Borrego Substation fence); conductor and insulators from the pole to a new 69kV termination rack (busbar) to be placed in the 69 kV equipment area; two breakers; two disconnect switches; and, associated protection and control equipment for security purposes. In conformance with guidelines set forth by the County of San Diego, all finished floors would be set one foot above the base flood elevation established in the BVFMR (either on fill pads or set on piers). The Drainage Analysis prepared for the Project in May 2010 ([revised September 2010 and](#) available under separate cover) determined that the Project as designed would not create a major change to the alluvial fan process within the 100-year flood hazard area.

The maximum blockage width perpendicular to the direction of flow is 40 feet. This is less than 50-percent of the 89 feet regime width. Based on the calculated regime width

and the measures taken to limit the flow blockage to less than 50 percent of the flow regime, the Project would be consistent with restrictions associated with the Light Density classification given in the BVFMR, and therefore, is not expected to create a significant change to the alluvial fan.

In addition, according to Section II.a of the BVFMR, erosion bank protection for all piers is required. The proposed foundations for the piers would be either a 4-inch diameter piling or a 4-inch by 6-inch metal “I” beam. The design scour depth for each pier foundation is 2.25 feet. The footing of each foundation would be constructed below this scour depth to adequately mitigate scouring impacts from alluvial flooding. Scour protection would be applied as recommended by the BVFMR. The scour due to runoff from each solar panel face is 0.4 inches. Therefore, the free falling runoff from each solar panel would produce numerically insignificant scour.

Installation of the PV solar panels and facilities would cause a minimal increase in the amount of impervious surface area on the sites identified as locations for the facilities. Such increases in impervious surfaces are not anticipated to result in an increase in the rate or amount of surface water runoff rate or cause flooding in onsite or offsite areas. All site drainage has been designed consistent with County of San Diego design standards to ensure that existing drainage patterns would not be substantially altered, and that the rate and/or runoff from any of the sites would not be increased over that which presently occurs.

There are no existing storm drain facilities on the Project site. No onsite drainage structures are proposed with the Project, due to the rural nature of the area; however, an existing 18-inch culvert located where the private access road (leading to/from the 53-acre lease parcel) meets Palm Canyon Drive would be replaced with a 14-inch by 23-inch (oblong-shaped) pipe with the Project to enhance drainage facilities at this location.

The Project does not include the construction of any housing and would not result in construction of any habitable structures within a 100-year flood hazard area. In addition, implementation of the Project would not result in changes to the existing use of the affected properties that would expose additional people or structures to a significant risk of loss, injury, or death involving flooding.

Part II

Regional Land Use Element:

Policy 1 Regional Categories

- 1.4 Rural Development Area (RDA) - The RDA includes much of the privately-owned properties outside the service boundaries of the County Water Authority. This area is primarily made up of agricultural or unimproved lands and remote pockets of residential development. Parcel sizes generally be dictated by the availability of groundwater and other environmental and resource constraints.
- 1.5 Country Town (CT) - This category applies to existing, small, historically established retail/residential areas serving surrounding low density rural areas or functioning as resorts. They are designated for generally one-acre lots or more intensive uses and are clearly removed geographically from existing or project urban areas.
- Uses and densities will be those permitted by the applicable community or subregional plan map, the County Zoning Ordinance, and where applicable, the Groundwater Policy.

Policy 2 Land Use Designations and Use Regulations

- 2.4 Non-Urban Residential Designations:
- Multiple Rural Use (18) - This designation is applied in areas with one or more of the following characteristics: ...watershed, desert lands, lands susceptible to fires and erosion; lands which rely on groundwater for water supply; and other environmentally constrained areas. The Multiple Rural Use designation is typically...applied in remote areas to broad expanses of rural land with overall low population density and with an absence of most public services.

The Project would be consistent with the above-stated Policies of the Regional Land Use Element. Other than a single-family home on an existing lot, it is not intended that any development occur unless the proposed development has been carefully examined

to assure that there will be no significant adverse environmental impacts, erosion and fire problems will be minimal, and no urban levels of service will be required.

The 288-acre parcel has a General Plan land use designation of (18) Multiple Rural Use, with a Regional Category of Rural Development Area (RDA). The 53-acre lease parcel has a General Plan land use designation of (18) Multiple Rural Use, with a Regional Category of Country Town (CT). Zoning for the 288-acre parcel is General Rural (S92), while zoning for the 53-acre lease parcel is Rural Residential (RR .25). The proposed solar PV farm is an allowed use within the existing zoning designations with approval of a MUP. As such, no changes to either the existing General Plan land use or zoning are proposed.

The approximately 5-acre parcel supporting the Borrego Substation proposed expansion area has a General Plan land use designation of (18) Multiple Rural Use, with a Regional Category of Rural Development Area (RDA). Zoning for the parcel is General Impact Industrial Use Regulations (M54). The Project proposes installation of utility transmission facilities, similar to those which presently exist on the parcel, and are allowed within the M54 zone. As such, no changes to either the existing General Plan land use or zoning are proposed.

3. *Environmental Goals*

- 3.1 Protect lands needed for preservation of natural and cultural resources; managed production of resources; and, recreation, educational, and scientific activities.

The Project would be consistent with the above-stated Goal of the Regional Land Use Element. The Project design includes onsite preservation of approximately 17 acres for the protection and avoidance of significant cultural resources, and provides for cultural resource monitoring during construction. The Project would impact sensitive biological resources, which would be mitigated to below a level that is less than significant. Refer also to the Biological Resources Analysis ([prepared June 2010, revised September 2010](#)) and Cultural Resources Analysis ([June 2010](#)) prepared by Affinis ~~in June 2010~~ (reports available under separate cover).

- 3.2 Promote the conservation of water and energy resources.

The Project would be consistent with the above-stated Goal of the Regional Land Use Element because it proposes an unmanned solar facility that would use minimal water for ongoing maintenance and cleaning, and would provide a large quantity of clean

energy. To allow for ongoing maintenance of the PV solar panels, connection to the public water system is proposed. The Project would connect to an existing 10-inch Borrego Springs Water District-owned water line in Palm Canyon Drive and would extend the line to the southwest corner of the 53-acre-lease parcel. The line would then be extended within the interior of the site as needed to allow for distribution. It is anticipated that the PV solar panels would be washed ~~approximately 2~~up to four times per year to remove dust particles and other buildup to ensure optimum solar absorption. Minimal amounts of water (~~less than 800,000~~ approximately 700,000 gallons per year (2.1 acre-feet), or the rough equivalent of ~~six~~five single-family homes) would be used to clean the panels on an infrequent basis. An additional estimated 288,750 gallons (0.9 acre-feet) would be required every two years for dust suppression purposes. As such, the Project would result in a minimal demand for public water, and an adequate water supply is available. The Project would therefore not represent a use with a high demand for water, allowing water supplies to be conserved for other uses, as needed.

The PV solar farm would generate clean energy for sale and distribution to the public. In addition, due to the nature of the Project, the solar facilities would utilize minimal energy, and the Project would support County efforts to promote energy conservation.

Part III. Circulation Element:

The General Plan Circulation Element identifies specific roadways as key elements within the County's roadway system. The Circulation Element classifies these roadways using certain design specifications (e.g. number and width of lanes) to categorize each road in its existing condition, and as intended by the County at its ultimate buildout in the future.

The Project would be consistent with the Circulation Element. Two Circulation Element roads are located adjacent to lands affected by the Project components. Palm Canyon Drive is classified as a Major Road west of SA 190 and as a Collector Road east of SA 190. Borrego Valley Road north of Palm Canyon Drive is classified as a Light Collector; south of Palm Canyon Drive, the road is classified as a Collector. No physical improvements are proposed with the Project that would affect or disturb the existing condition of these roadways.

A temporary minor increase in traffic may occur along area roadways during the construction phase, as workers and materials are transported to and from the affected

sites. Approximately 30 construction vehicles trips per day are anticipated to take place during Project construction, with up to a total of 3,000 construction vehicle trips anticipated to occur during the entire construction period; however, traffic generated by Project construction activities is not expected to cause a significant short-term increase in area traffic volumes, due to the nature and scope of the construction activities required (i.e., limited grading, delivery of pre-constructed panels to the sites, etc.). With the exception of installation of new utility poles or alteration of existing poles along Palm Canyon Drive and/or Borrego Valley Road, all Project construction activities would occur onsite, thereby minimizing potential conflicts with or interruption of area traffic flow or vehicular circulation.

In addition, long-term operation of the facilities would not generate a substantial number of vehicle trips. It is estimated that two employees (one maintenance vehicle) would visit the site on a daily basis for inspection and maintenance purposes, or as otherwise needed. This represents a vehicle trip generation rate of two average daily trips (ADT) for Project traffic (one vehicle making one daily trip to and from the site, or two overall trips per day, seven days per week). As such, traffic generated by long-term operation of the facilities is not anticipated to exceed, either individually or cumulatively, a roadway level of service standard established by the County. In addition, on intermittent occasions, the presence of several workers may be required if major repairs or replacement of equipment is required; however, due to the nature of the facilities, such actions are anticipated to be infrequent.

Panel cleaning would also be conducted by EE Borrego Land, LLC, or its subsidiaries or subcontracted labor, and would require an estimated four vehicles and associated crews. A team of 10 to 12 personnel would perform the required cleaning activities over an anticipated period of four weeks. Panel-cleaning activities are anticipated to generate approximately 8 ADT [4 vehicles x 2 trips/day (to and from the site)] during the four week period. Therefore, each cleaning event would generate an estimated 160 vehicle trips total ([4 vehicles x 2 trips/day] x 5 days/week x 4 weeks), or a maximum of ~~320~~ 640 vehicle trips over a one-year period if the panels were washed ~~twice~~ four times. Traffic generated by such activities would therefore be minimal and would not adversely affect circulation patterns or contribute a significant number of vehicle trips along area roadways.

Part IV. Recreation Element:

Goal:

Provide a system of public parks, riding and hiking trails, and outdoor recreation facilities which not only preserve significant areas of natural beauty for citizen enjoyment, but which also serve the needs of the citizens in the immediate environments.

The Project would be consistent with the above-stated Goal of the Recreation Element. The Recreation Element is intended to enhance the mental, spiritual, and physical well being of County residents through recreational opportunities, or to provide a system of parks, trails, and outdoor recreation facilities for citizen enjoyment. The Project would result in the installation of solar PV panels and supporting transmission facilities to allow for the generation and transfer of clean energy. No housing is proposed that could potentially induce population growth in the area, thereby creating an increased demand for public recreational amenities such as parks or recreational facilities.

The Project design includes provision of one easement to allow for future construction of multi-use recreational trails, consistent with County requirements. Pursuant to the adopted Borrego Springs Community Trails and Pathways Plan, the Project proposes dedication of a 15-foot trail easement along the northern and western boundary of the 288-acre parcel to allow for future construction of a multi-use, non-motorized trail. The Project does not propose to provide specific improvements for trail construction at either of these locations at this time. In addition, the Project Proponent has received a letter from County Department of Parks and Recreation (dated November 18, 2009), indicating that no trail improvements or easement dedications are required within the Palm Canyon Drive right-of-way. No trail improvements or easement dedications are required with regard to the improvements at the Borrego Substation expansion area.

Part V. Seismic Safety Element:

Goals:

- Minimize injury and loss of life;
- Minimize damage to public and private property; and,
- Minimize social and economic dislocations resulting from injuries, loss of life, and property damage.

Policies:

1. Require all buildings to meet the standards of the Uniform Building Code (UBC).

The Project would be consistent with the above-stated Goals of the Seismic Safety Element. No habitable structures are proposed with the Project, thereby avoiding the potential for seismic events to result in significant damage to homes or create a human safety risk. All repairs to any damaged Project facilities as the result of a seismic event would be required to comply with applicable requirements of the UBC and any recommended engineering design measures. Therefore, compliance with these standards is anticipated to limit potential hazards caused by seismic ground shaking.

The lands affected by the Project are generally flat, as are lands located within the immediately surrounding areas. Flat areas have little to no potential for landslides or to experience sliding from adjacent areas. No steep hillsides are within proximity to areas affected by the Project.

It is not anticipated that any of the lands potentially affected by the Project support geologic conditions that would result in a significant potential for onsite or offsite landslides, lateral spreading, subsidence, liquefaction or collapse; however, prior to construction of the proposed facilities, lands potentially affected by the Project would require preliminary geotechnical evaluation on an individual basis, as appropriate, to identify the potential for unstable or expansive soils to occur. Due to the nature of the facilities proposed, and with implementation of County engineering design recommendations and compliance with UBC requirements, implementation of the Project would not create unstable geologic conditions or significantly increase the potential for injury or loss of life, or damage to public or private property.

Part VI. Scenic Highway Element:

Objective 2:

Designate and maintain rural scenic highways to provide access to scenic and recreational resources.

The Project would be consistent with the above-state Policies of the Scenic Highway Element. One County Scenic Highway (SR 78) is located approximately nine miles to the south of the Project site. State Route 78 from the western to the eastern boundary of the Anza-Borrego Desert State Park is an existing official Scenic Highway, as identified in the Scenic Highway Element of the County General Plan. In addition, Old

Overland Stage Route (S2) from the Imperial County line north to State Route 78 and Montezuma Valley Road, Hoberg Road, and Truckhaven Trail (S22) from the western boundary of the Anza-Borrego Desert State Park to the Imperial County line are also designated as official Scenic Highways.

The Project will not result in significant changes to the existing visual landscape from any of these scenic highways. This is due to both the fact that the Project is a substantial distance from these vantage points, and also to the fact that the Project is of a low-lying nature. The Project will involve installation of a new 69kV termination rack (approximately 40 feet in height) at the Borrego substation, but that rack is of a similar height to existing transmission facilities (approximately 40 feet) at that location. Thus, the Project will not be inconsistent with the Scenic Highway Element.

Additional ~~visual~~ analysis with regard to visual resources is set forth in ~~a more detailed~~the Visual Resources/Aesthetic Analysis prepared in June 2010 (updated September 2010), ~~(available under separate cover)~~.

Part VII. Public Safety Element:

Goal:

Minimize injury, loss of life, and damage to property resulting from fire, geologic, or crime occurrence.

Chapter 2: Fire Hazards

Policy 1:

The County shall seek to reduce fire hazards to an acceptable level of risk.

The Project would be consistent with the above-stated Policies of the Public Safety Element. The Project is located within an area affected by the County's Wildland Urban Interface Ordinance, according to the County Fire Marshal. The Ordinance applies to lands with a high potential for risk of wildfire, and therefore, such lands are subject to additional preventative design measures to reduce the occurrence or spread of wildfire.

The solar PV panels would be installed in rows a maximum of 300 feet in length with a 24-foot wide access road to either side. This would allow fire trucks to maneuver along the access roads and meet the 150-foot maximum hose length allowed by the fire trucks (150 feet from each direction).

It is anticipated that a 30-foot brush clearing zone (measured inward from the property boundary) would be required on the 288-acre parcel and the 53-acre lease parcel (does not include the shared boundary between the two parcels). As such, the Project has been designed to incorporate a 30-foot brush clearing zone.

Implementation of the Project would not result in the construction of any new habitable structures and would not increase the potential for exposure of people or structures to wildland fires from existing conditions. The solar panels would be constructed of glass and would not represent a significant potential for the risk to generate wildfire. Due to the nature of the facilities, the short-term construction and/or long-term operation of the Project would not involve the use of flammable or hazardous materials that would increase the risk for wildfire to occur as the result of the Project.

The Borrego Springs Fire Protection District requires installation of a fire hydrant at the southwesterly corner (entrance) of the 53-acre lease parcel. The Project would connect to an existing Borrego Springs Water District-owned water line in Palm Canyon Drive and extend the line north along the access road serving the Project, which would provide an adequate water supply for the fire hydrant. To allow for annual maintenance of the solar panels (~~0-2~~ [washing of the panels up to four times per](#) year), connection to the public water system via hose bib at the storage building is proposed.

In addition, the proposed expansion area at the Borrego Substation would be cleared and grubbed to create a flat building pad. The pad would be permanently surfaced with gravel, thereby avoiding the need for the Project to provide additional vegetation clearance, as the proposed facilities would be distanced from the property boundary; refer to Figure 3E, SDG&E Borrego Substation – Proposed Expansion Area.

For the reasons above, the Project would not conflict with the Public Safety Element. Refer also to the Fire Protection Plan (Letter Report) prepared for the Project in January 2010 ([revised September 2010 and](#) available under separate cover).

Chapter Four: Crime Prevention

Policy 2:

Encourage crime prevention through the planning process by establishing specific design criteria and standards to be used in the review of land use development.

The Project would be consistent with the above-stated Policies of the Public Safety Element. Lands affected by the Project would be served by the County of San Diego

Sheriff's Department from its station located at 571 Palm Canyon Drive in Borrego Springs, approximately 2.9 miles to the southwest of the southwest corner of the 53-acre lease parcel. Once the solar panels are installed, the panels would operate during daylight hours, seven days per week, and 365 days per year. Security would be maintained through installation of an 8-foot high chain-link fence that would include one foot of three-strand concertina wire along the perimeter of the 288-acre parcel, 53-acre-lease parcel, and the proposed expansion area.

Infrared security cameras, motion detectors, and/or other similar technology, would also be installed to allow for monitoring of the site through review of live 24/7 footage. A security patrol would also be contracted by EE Borrego Land, LLC, for security purposes. Should the security system detect the presence of unauthorized personnel, a security representative would be dispatched to the facility, and appropriate local authorities would be notified. The Project applicant will continue to coordinate with DPLU, Sheriff's Department, and County Fire Marshal, as applicable, to identify appropriate design measures to reduce the potential for crime or wildfire to occur.

Part VIII. Noise Element:

Policy 4a:

Insure acceptable noise levels at the receiver's site by incorporating appropriate regulations and standards in the County's development policies and ordinances.

Policy 4b:

Because exterior community noise levels (CNEL) above 55 to 60 decibels (dB) and/or interior CNEL levels above 45 decibels may have an adverse effect on public health and welfare, it is the policy of the County of San Diego that:

1. Whenever possible, development in San Diego County should be planned and constructed so that noise sensitive areas are not subject to noise in excess of CNEL equal to 55 decibels.
2. Whenever it appears that new development will result in any noise sensitive area being subjected to noise levels of CNEL equal to 60 decibels or greater, an acoustical study should be required.

3. If the acoustical study shows that noise levels at any noise sensitive area will exceed CNEL equal to 60 decibels, the development should not be approved unless the following findings are made:
 - A. Modifications to the development have been or will be made which reduce the exterior noise level below CNEL equal to 60 decibels; or,
 - B. If with current noise abatement technology, it is infeasible to reduce exterior CNEL to 60 decibels, then modifications to the development have been made or will be made which reduce interior noise below CNEL equal to 45 decibels.

The Project would be consistent with the stated Policies of the Noise Element. Short-term noise impacts would be associated with construction activities for the Project. Construction-related short-term noise levels would be higher than existing ambient noise levels in the Project area, but would cease once Project construction is completed. All construction would be required to comply with applicable restrictions on hours and standards for such activities, per established County of San Diego noise level thresholds, to reduce the potential for significant noise impacts to occur. In addition, sensitive receptors (i.e. residential uses, schools, etc.) are not located within close proximity to the affected parcels, and therefore would be distanced from any construction-related noise.

Long-term operation of the solar PV panels and associated transmission facilities is not anticipated to generate significant noise levels that would exceed local noise level thresholds. To reduce potential noise effects on surrounding sensitive noise receptors, the two onsite substations and the inverter structures would be set back from all property lines a minimum of 105 feet. This would ensure that noise generated by any onsite mechanical equipment (e.g. transformers, air conditioning units, etc.) would be reduced to below County thresholds for noise levels. Refer also to the Noise Analysis prepared by LDN Consulting, Inc. in June 2010 (available under separate cover).

It is anticipated that maintenance of the solar panels and transmission facilities would require the presence of two workers under contract to EE Borrego Land, LLC, to perform visual inspections and minor repairs and provide tours once per week, on

average. As such, the Project is not anticipated to contribute to a significant increase in noise levels along area roadways above existing conditions as the result of Project-related traffic. In addition, the facilities would be constructed within an environment where noise is presently generated by daily operation of the Borrego Valley Airport, as well as by traffic traveling along Palm Canyon Drive and Borrego Valley Road. As such, no adverse noise effects are anticipated with long-term operation and maintenance activities associated with the Project.

The Project would introduce a new land use in the area; however, the Project would not cause a substantial permanent increase in ambient noise levels either onsite and/or beyond the property boundaries of the affected parcels. The Project would not expose people residing or working in the area to excessive noise levels either during construction or long-term operation of the facilities.

Part IX.

Housing Element:

Goal:

1. Assist the private sector...to ensure that new residential construction will be available to meet the needs of the region if adequate public services and facilities are in place.

The Project would be consistent with the above-stated Goals of the Housing Element. The Project does not propose the construction of residential housing or other land uses that would create an increase in the local population or the current demand for housing. The energy generated would be transmitted to the existing Borrego Substation and ultimately sold for public consumption.

It is anticipated that overall construction of the Project would take approximately 10 months to complete, with crews working six 10-hour days per week. Up to 150 employees would be working onsite at the peak of construction. Local labor would be utilized to the extent possible. It is estimated that approximately 30% of the labor force would be obtained locally. Any housing needs for construction workers would be short-term and temporary, and therefore, are not anticipated to create a significant, permanent increase in area housing demands.

Part X. Conservation Element:

Chapter 3 Water:

Policy 6

Conserve groundwater resources in areas where imported water is not available. The management objectives will be:

Cumulative groundwater extraction will not exceed the short-term or long-term groundwater resources of the area;

Groundwater quality will not be significantly degraded by surface or subsurface discharge of wastewater.

Action Program 6.3:

Prepare regulations which provide that non-agricultural projects requiring discretionary approval, which will utilize two or more acre-feet of groundwater per year, shall be denied if they cannot meet the objectives of Policy 6 or provide adequate mitigation. Such projects shall provide documentation of an adequate supply of groundwater prior to approval. Note: Two acre-feet of water will supply six dwelling units with average size families for one year.

The Project would be consistent with the stated Policy and Action Program of the Conservation Element with regard to groundwater, The Project proposes the (indirect) use of groundwater or potable water for short-term construction and/or long-term operation of the proposed facilities.

The Project applicant proposes to connect to the public water system to allow for occasional ~~(approximately 2 times per year) rinsing~~ washing of the solar panels (up to four times per year) and for dust suppression purposes (every two years). The connection would be made via hose bib at the storage building. The Project would connect to an existing Borrego Springs Water District-owned water line in Palm Canyon Drive and extend the line north along the access road serving the Project. A private water line would then be extended onsite to the proposed storage shed on the 288-acre parcel to provide a water supply for maintenance activities. The use of water for maintenance purposes is not anticipated at the proposed 69kV equipment area.

As the Borrego Springs Water District currently obtains its water from groundwater sources and stores the groundwater for public sale and distribution, the Project would indirectly utilize groundwater supplies. Section 67.720 of the San Diego County

Groundwater Ordinance requires that for any proposed project within the Borrego Valley Exemption Area that consists of a total of 100 acres or more, that a Groundwater Investigation be prepared to determine if groundwater resources are adequate to meet the groundwater demands of the project. The County of San Diego Department of Planning and Land Use prepared a Groundwater Investigation Report (available under separate cover) in September 2009 (revised August 2010) for the proposed Project. The proposed Project would utilize an estimated ~~800~~700,000 gallons (~~, or 2.462.1~~ acre-feet) ~~(AF)~~, of imported groundwater from the Borrego Water District on an annual basis to allow for washing of the solar panels, which is roughly equivalent to the annual water demand of approximately ~~five~~six single-family residential housing units. In addition, an estimated 288,750 gallons (0.9 acre-feet) would be required every two years for dust suppression purposes.

Total groundwater use for the Project would be approximately 16 acre-feet for construction, and approximately 87 acre-feet for post-construction uses over the estimated 30-year life of the Project. This would result in a total groundwater use over the 30-year life of the Project of 103 acre-feet. By dividing the total groundwater use of 103 acre-feet by 30 years, it is estimated the Project would require approximately 3.5 acre-feet on an annualized basis.

To ensure groundwater impacts are adequately mitigated, the Major Use Permit would be conditioned to have a maximum allowable groundwater use for the Project; however, the maximum amount allowed was increased by approximately 10% to take into account any inaccuracies within the water demand calculations or unanticipated circumstances not accounted for where additional water may be needed. As a result, a maximum of 17.5 acre-feet of groundwater would be allowed during the construction phase of the Project; a maximum 3.5 acre-feet per year of groundwater would be allowed for the solar panel washings and ongoing dust suppression activities during the remaining 29 years of the MUP. This would result in a maximum allowable groundwater use of 119 acre-feet during the life of the Project. To ensure the Project stays within its maximum allowable use, the applicant would be required to provide the County with its annual water bill from the Borrego Water District.

The Project would also be required to implement offsetting groundwater use reduction measures that save an amount of water at least equivalent to the Project's demand amount (conservatively estimated at four acre-feet per year), elsewhere in Borrego Valley such that there is a "no net gain" in the overall groundwater extraction in Borrego Valley. The applicant will ensure that there is "no net gain" by recording an

easement on offsite land that has been continuously used for agriculture or golf course purposes for at least the past five years and is being irrigated with at least four acre-feet of groundwater annually from the Borrego Valley groundwater aquifer. The easement will be granted to the County and will permanently prohibit the use, extraction, storage, distribution, or diversion of water from the Borrego Valley groundwater aquifer on land subject to the easement. Based on a maximum allowable water use of 119 acre-feet, the Project would use a maximum of approximately four acre-feet (conservatively) on an annualized basis over the 30-year life of the permit. With the inclusion of a condition to ensure water use for the Project does not exceed its maximum projected use, and through a legally enforceable mechanism to offset its water use, the Project would not have a significant adverse effect on groundwater resources.

The Borrego Valley aquifer has a well-documented groundwater overdraft condition wherein annual extraction exceeds the amount of groundwater recharged back into the aquifer. The Groundwater Investigation determined that at the current rate of extraction, the upper and middle aquifer may be fully depleted in a little over 100 years. ~~However,~~ however, the proposed land use would not create a significant demand on groundwater supplies because it would represent a significant decrease in water use as compared to that if the site were to be developed with residential uses as allowed under the existing Multiple Rural Use General Plan land use designation.

In addition, the Project would not adversely affect groundwater quality through the discharge of surface or subsurface wastewater. Water used to clean the solar PV panels would be absorbed into the underlying ground surface, thereby contributing to the recharge of the groundwater table; however, no chemicals or hazardous materials would be used in washing the panels that would have the potential to create wastewater that could degrade the quality of the underlying groundwater table. In addition, the low water demand of the Project would reduce potential effects with regard to water quality caused by decreased water levels inducing flow of poor quality water found in deeper formational materials of the aquifer, as compared to if the site were developed with residential uses.

Chapter 4 Vegetation and Wildlife:

Policy 1

The County will act to conserve and enhance vegetation, wildlife, and fisheries resources.

Policy 2

San Diego County shall coordinate with appropriate Federal, State and local agencies to conserve areas of rare, endangered, or threatened species.

Policy 6

If a project is determined to have significant adverse impacts on plants or wildlife, an acceptable mitigating measure may be voluntary donation of land or monies for acquisition of land of comparable value to wildlife.

Action Program 6.1

Revise appropriate ordinances and procedures to accept land of comparable value to wildlife as a mitigating measure. The County's selection of these mitigation areas will be based on the following criteria:

- Habitats or environmental resources in mitigation areas should be the same type as those impacted.
- Mitigation areas should be as close as practical to the impacted resource.
- High priority should be given to preservation of endangered habitats or other resources as mitigation areas.
- Mitigation areas within or adjacent to designated (planned) conservation areas (i.e. State reserves, ecological preserves, U.S. Forest) will be given high priority.

The Project would be consistent with the above-stated Policies and Action Program of the Conservation Element. The Project has been designed to minimize impacts on sensitive habitat and animal species to the extent feasible. The Project would result in the loss of 333.5 acres of desert saltbush scrub and 3.77 acres of stabilized and partially stabilized desert dunes. These impacts would be fully mitigated through purchase of suitable offsite habitat at a 2:1 ratio. All mitigation land would ultimately be under State ownership as part of Anza Borrego Desert State Park, or otherwise as set forth in a Habitat Mitigation Plan that is being submitted for County approval with input from interested parties. Refer also to the Biological Resources Report prepared by Affinis in June 2010 ([revised September 2010](#)), available under separate cover).

Several additional mitigation measures will be incorporated into Project design and construction. For instance, potential Project impacts to the loggerhead shrike would be mitigated by disallowing grubbing and grading during the breeding season (March to August), even though no shrike habitat was found onsite during surveys. Potential impacts to any sensitive reptile species would be avoided by implementation of a fencing and capture plan in accordance with the Flat-Tailed Horned Lizard Rangewide Management Strategy adopted and implemented by the United States Fish & Wildlife Service.

No additional impacts to habitat were identified due to the increase in the building footprint at the Borrego Substation.

Policy 16

The County will regulate major land-clearing projects to minimize significant soil erosion, destruction of archaeological, historic, and scientific resources and endangered species of plants and animals.

Action Program 16.1

Prepare a land clearance ordinance in conjunction with other appropriate agencies. This ordinance will establish a discretionary permit procedure. The ordinance shall include:

- Minimum project size requiring a permit;
- Standards for evaluating permits;
- Mitigating measures;
- Exemptions;
- Appeal procedures; and,
- Enforcement procedures.

The Project would be consistent with the above-stated Policy and Action Program 16.1 of the Conservation Element. Through the MUP review and approval process, the Project design would be consistent with applicable measures with regard to land clearing activities and requirements for the provision of appropriate mitigation measures to reduce potential impacts resulting from such activities. Although the majority of land surface affected by the Project is generally flat, limited portions of the 288-acre parcel and the 53-acre lease parcel would be graded to provide a ground surface that can adequately accommodate the PV solar panels. Grading on these two parcels would

require an estimated 107,000 c.y. of balanced cut and fill. The remainder of these two parcels would be cleared and grubbed to allow for installation of the panels and associated facilities. Limited clearing and grubbing would be required for the expansion area at the Borrego Substation site. Grading is estimated to range between approximately 300 to 800 c.y. of balanced cut and fill over the 0.82-acre area to create a level building pad for installation of the proposed facilities. As such, major earthwork or land-clearing activities are not proposed or required with Project implementation.

Any grading required for installation of the solar panels or transmission facilities would not significantly alter the existing drainage pattern of any of the sites in a manner that would result in substantial erosion or siltation either on- or offsite. Prior to construction, preparation of erosion control plans and/or incorporation of best management practices (BMPs) to minimize potential erosion and sedimentation impacts during grading and construction would be required, as applicable. In order to control potential dust and erosion during the life of the Project, a non-toxic, biodegradable permeable soil-binding agent or permeable rock material will be applied to all disturbed or exposed surface ~~areas~~ areas as follows: a) A permeable soil-binding agent suitable for both traffic and non-traffic areas shall be used. These agents shall be biodegradable, eco-safe, with liquid copolymers that stabilize and solidify soils or aggregates and facilitate dust suppression; or, b) Alternatively, a permeable rock material consisting of either river stone decomposed granite or gravel could be placed in a thin cover over all exposed surface area in-lieu of the binding agent referenced above. In-lieu of, or in combination with a) and b) above, the areas located between the arrays, and any non-drivable surface may be revegetated with native noninvasive plant species. The soil-binding agent would be reapplied approximately every two years for maintenance purposes. ~~The binding agents would be suitable for both traffic and non-traffic areas. Binding agents such as PolyPavement require a single initial application and periodic maintenance every 2-3 years. These agents are biodegradable, eco-safe, liquid copolymers that stabilize and solidify soils or aggregates and facilitate dust suppression. Once applied to the soil, the copolymer molecules coalesce forming bonds between the soil particles. These materials are commonly used on non-paved service roads, golf course paths, dirt bike tracks, helicopter landing areas, etc. Alternatively, a permeable rock material consisting of either river stone decomposed granite or gravel would be placed in a thin cover over all exposed surface areas for the purposes of dust and erosion control.~~

As mentioned previously, the Project has been designed to minimize impacts on sensitive biological and cultural resources. Mitigation is proposed to reduce potential impacts on such resources to less than significant through dedication of open space easements, offsite purchase of mitigation lands, limitations on grading, and/or monitoring activities. Through implementation of the design measures and mitigation measures proposed, Project impacts would be reduced to less than significant.

Chapter 7 Astronomical Dark Sky:

- Policy 1 The County of San Diego will act to minimize the impact of development on the useful life of the observatories.

The Project would be consistent with the above-stated Policy of the Conservation Element. Limited Project lighting would be installed to allow for ongoing maintenance and security. Low-level lighting would be installed at the main entry gate to the 53-acre-lease parcel. Lighting would be placed on poles of 15 feet or less in height or attached directly onto the exterior wall of the structure and would be 200 watts or less (total combined per each location). Low-level lighting would also be installed at the main entry gate of the expansion area to facilitate access.

All lighting would be operated manually or activated via motion sensors. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent ownerships and/or open space lands, and would conform to County of San Diego outdoor lighting requirements to minimize potential impacts on the dark sky.

Chapter 8 Cultural Sites:

- Policy 1 The County shall take those actions, which will seek to conserve and protect significant cultural resources.
- Policy 5 Encourage the use of open space easement in the conservation of high-value cultural resources.

The Project would be consistent with the above-stated Policies of the Conservation Element. The Project has been designed to minimize and/or avoid impacts on sensitive cultural resources, and proposes the dedication of open space easements for long-term protection of sensitive cultural resources onsite. Mitigation measures, such as monitoring during grading and construction, are proposed to reduce project impacts on cultural resources to less than significant. Refer also to the Cultural Resources Analysis prepared by Affinis in June 2010 (under separate cover).

XI. Energy Element:

Goals

- Goal 1 Define and assure adequate energy supplies for San Diego County.
- Goal 2 Encourage the utilization of alternative passive and renewable energy resources.
- Goal 3 Maximize energy conservation and efficiency of utilization.

The Project would be consistent with the above-stated Goals of the Energy Element. The Project would provide a new source of clean renewable energy to help meet current and future energy demands within San Diego County. The Project would involve the passive generation of energy from an alternative and renewable energy source. As stated previously, the Project represents an opportunity to provide an efficient, supplemental source of energy from clean fuel sources with minimal environmental disturbance. The Project is intended to take advantage of the solar resources available in the climatic setting of the Borrego Springs area to generate electrical power for distribution to San Diego County residents and provide a reliable, long-term clean energy source. As a clean energy source, the generation and use of electricity from solar power would offset the generation of carbon dioxide (CO₂). It is estimated that the use of solar power would offset approximately 0.5 tons of CO₂ per Mega Watt hour (MWh), as compared to that of electricity generated by the use of fossil fuels. Therefore, the Project represents a more efficient source of energy to satisfy future energy demands within the County.

- Goal 4 Minimize environmental impact of energy sources.
- Goal 6 Minimize possibility of energy shortages and resulting hardships.
- Goal 8 Encourage compatibility with national and state energy goals and city and community general plans/regional comprehensive plans.

The Project would promote the above-stated Goals of the Energy Element. The Project represents the opportunity to generate energy from a clean, renewable source, thereby minimizing potential impacts on the environment. The Project would provide an additional source of energy to supplement existing energy supplies and help to meet future energy demands within the County. The Project is consistent with goals and

policies given in the County General Plan with regard to energy, and is allowed under the existing General Plan land use and zoning designations with approval of a Major Use Permit.

Objectives

- Objective 1 Achieve maximum conservation practices and maximum development of renewable sources of energy.

(Supply) Policies

- Policy S-1 Promote accelerated market penetration of solar equipment and technology.
- Policy S-6 Support the timely utilization of wind power...solar electric and solar thermal power, and other potentially viable and cost-effective alternative energy sources, as the public issues, which may surround the use if these energy sources become resolved.

The Project would be consistent with the above-stated Objective and Policies of the Energy Element. The Project takes advantage of available renewable solar resources abundant in the Borrego Springs area, allowing for the generation of clean energy. The Project represents a viable and cost-effective energy-generating project that provides a supplemental source of power to satisfy future energy demands within San Diego County. EE Borrego Land, LLC, has successfully implemented similar solar PV projects both in the United States and internationally, demonstrating the capabilities and efficiencies of such technology.

In addition, the Project directly addresses state energy goals by providing an alternative energy source. The California Solar Rights Act of 1978 is found in the California Civil Code at Sections 714 and 801. Through its rules and regulations, the State has expressed strong support for alternative energy sources. The State views solar power as an important energy source for today and for the future throughout the State.

Statewide land use policies also strongly promote the development of renewable energy projects, as pronounced in a 2001 amendment to Title 7 of the California Government Code (State Planning and Land Use), which provides as follows:

“The implementation of consistent statewide standards to achieve the timely and cost-effective installation of solar energy systems is not a municipal affair, as that term is used in...the California

Constitution, but is instead a matter of statewide concern. It is the intent of the Legislature that local agencies not adopt ordinances that create unreasonable barriers to the installation of solar energy systems.

It is the intent of the Legislature that local agencies comply not only with the language of this section, but also the legislative intent to encourage the installation of solar energy systems by removing obstacles to, and minimizing costs of, permitting for such systems.”
CA Gov. C. §65850.5(a).

XII.Public Facility Element:

Section 5 Flood Control:

Goal: Protect life and property in areas subject to flooding.

Objective 1: Reduction in the need for flood control structures.

The Project would be consistent with the above-stated Goal and Objective of the Public Facility Element. The Flood Hazard Map for Borrego Valley Alluvial Fans shows that the Project lies along the valley floor of the Coyote Canyon alluvial fan within Borrego Valley. The nearest defined alluvial wash is Coyote Creek, which is located approximately 3,000 feet east of the Project. Alluvial fans typically occur in arid environments where steep mountains encounter a flat valley floor. These areas usually experience infrequent but intense storms. This particular combination of topography and climate tends to produce flash floods yielding high sediment loads along the steep mountainside, while channel braiding (washes) and sediment deposition occur along the gentle slopes of the valley floor.

No housing or habitable structures would be constructed with the Project. The Project would not alter existing drainage patterns in the area of the affected sites, nor would the Project cause substantial changes to the natural erosion and siltation processes onsite or offsite. The Project would not increase flow rates over the existing condition, and therefore, flooding is not anticipated onsite or offsite as the result of Project implementation.

RBF reviewed the findings of the BVFMR, prepared by Boyle Engineering Corporation in October 1989, which provides guidelines for development within the Borrego Valley to minimize adverse effects with regard to flooding potential. The Project considers

these guidelines and incorporates design measures in order to minimize the effects of flooding and erosion and to increase building safety.

Breakaway fencing would be used around the exterior perimeter of the 288-acre parcel, 53-acre lease parcel, and the proposed expansion area, with exception of the existing fencing that runs along the northern boundary of the Borrego Airport property, pursuant to the BVFMR for Light Density classification (Project as designated in the BVFMR). Proposed structures and perimeter fencing will not block more than 50 percent of the calculated regime width. Such fencing would eliminate the potential for debris to collect along the fence and further impede water flows if it were to remain vertical during a flood event.

The Borrego Valley Flood Hazard Map shows a depth of one foot and a velocity of four and a half feet per second for the Project area under 100-year flood conditions. The Project proposes solar PV panels aligned along an east-west axis on piers or “I” beams; enclosed structures for inverters and transformers; two onsite substations; and, one onsite storage shed within the 100-year flood hazard area. In conformance with guidelines set forth by the County of San Diego, all finished floors would be set one foot above the base flood elevation established in the BVFMR, either on fill pads or set on piers. The Drainage Analysis prepared for the Project ~~in~~ (prepared May 2010, revised September 2010 and ~~is~~ (available under separate cover) determined that the Project as designed would not create a major change to the alluvial fan process within the 100-year flood hazard area.

The maximum blockage width perpendicular to the direction of flow is 40 feet. This is less than 50 percent of the 89 feet regime width. Based on the calculated regime width and the measures taken to limit the flow blockage to less than 50 percent of the flow regime, the Project would be consistent with restrictions associated with the Light Density classification given in the BVFMR, and therefore, is not expected to create a significant change to the alluvial fan.

In addition, according to Section II.a of the BVFMR, erosion bank protection for all piers is required. The proposed foundations for the piers would be either a 4-inch diameter piling or a 4-inch by 6-inch metal “I” beam. The design scour depth for each pier foundation is 2.25 feet. The footing of each foundation would be constructed below this scour depth to adequately mitigate scouring impacts from alluvial flooding. Scour protection would be applied as recommended by the BVFMR. The scour due to

runoff from each solar panel face is 0.4 inches. Therefore, the free falling runoff from each solar panel would produce numerically insignificant scour.

There are no existing storm drain facilities on any lands affected by the Project. No onsite drainage structures are proposed with the Project, due to the rural nature of the area; however, an existing 18-inch culvert located where the private access road (leading to/from the 53-acre lease parcel) meets Palm Canyon Drive would be replaced with a 14-inch by 23-inch (oblong-shaped) pipe with the Project to enhance drainage facilities at this location.

Section 11. Fire Protection and Emergency Services:

Goal: Minimization of the loss of life and property from fires and medical emergencies.

Objective 1: Sufficient fire and emergency services facilities to meet established emergency travel time objectives to minimize fire and emergency risk.

[Maximum travel time to Land Use Category applicable to the Project site (Town) is five minutes].

The Project would support the above-stated Goal, Objective, and Policy of the Public Facility Element. The Project does not propose the construction of housing or other uses that would generate additional population in the area which may in turn increase demand for fire protection or emergency services. Lands affected by the Project are located within the County's Wildland Urban Interface area. A Fire Protection Plan Letter Report was prepared in January 2010 ([revised September 2010](#)) for the Project to evaluate potential wildfire risks and identify design measures to reduce the potential for wildfire to occur onsite (available under separate cover). The Project would comply with all measures and conditions identified in the Letter Report, and as required by the Borrego Springs Fire Protection District.

The Project design provides for a 30-foot-wide perimeter brush clearing zone on the 288-acre parcel and 53-acre-lease parcel to reduce the potential for wildfire to occur and/or spread (does not include the shared boundary between the parcels). This 30-foot-wide clearing would also serve to facilitate onsite circulation of emergency vehicles, in combination with additional driveways provided within the solar panel fields. The 53-acre parcel and the 288-acre parcel would be served directly from Palm Canyon Drive via a private 6-inch water line that would connect to a fire hydrant

located at the southwestern corner of the 53-acre lease parcel. The hydrant would meet the operational needs of the Project, pursuant to the County's Consolidated Fire Code. No additional improvements for the provision of water or emergency purposes are required for the improvements at the proposed expansion area. In addition, building construction for onsite structures would be limited to non-combustible construction primarily of concrete, block or steel.

In addition, the Borrego Springs Fire Protection District (BSFPD) would provide fire protection services for the main Project site from its station located at 2324 Stirrup Road, approximately 2.5 miles from the Project site. The BSFPD has confirmed that adequate facilities and personnel are available to serve the Project site, and maximum travel time to the Project can be met (5 minutes). The BSFPD has also confirmed that the existing 24-foot wide access drive would be adequate to provide access to the 288-acre parcel and 53-acre lease parcel with no additional improvements required. Existing access to the proposed expansion area is adequate, and no improvements at the Borrego Substation site with regard to emergency access are proposed.

For the above reasons, the Project is consistent with this above Goal, Objective, and Policy. Refer also to discussion provided under Part VII: Public Safety Element, Chapter 2 – Fire Hazards, above, for additional discussion.

3.1.2 General Plan Update (Pending Draft)

The County General Plan is currently being updated to provide goals and policies that will guide future development within the County over the long-term. The General Plan Update has not yet been adopted and is not likely to be adopted before the County takes final action on the Project. The General Plan Update is therefore not legally applicable to the Project.

3.1.3 Desert Subregional Plan (Part XXI)

The Desert Subregional Plan, last updated in 1995, is an inherent part of the existing County General Plan and provides supplemental goals and policies to guide development of this area of northeastern San Diego County, including the community of Borrego Springs. A brief discussion of Project conformance with applicable goals and policies given in the Desert Subregional Plan is included below.

Conservation Policies and Recommendations

2. Preserve the dark night sky as a natural resource enjoyed by residents and visitors to the desert. Dark sky is also essential to the effective operations of the nearby observatories.

The Project would be consistent with the above-stated Policy of the Desert Subregional Plan. As previously stated, exterior lighting for the Project would be limited to that required for maintenance and security purposes. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent ownerships and/or open space lands. All lighting would conform to County of San Diego outdoor lighting requirements.

It should be noted that the proposed use represents a relative decrease in the amount of potential light pollution produced, as compared to if the 53-acre-lease parcel or the 288-acre parcel were developed with residential uses, as allowed by the existing Multiple Rural Use designation. Minimal lighting for purposes of access and security would be provided at the proposed expansion area, similar to existing lighting provided for the Borrego Substation facilities, and therefore, the Project would not introduce a new source of lighting in an area where such conditions do not presently exist.

3.1.4 Borrego Valley Airport Land Use Compatibility Plan

The Project would be consistent with the Borrego Valley Airport Land Use Compatibility Plan. As the main Project site is located immediately adjacent to the Borrego Valley Airport, it is subject to relevant County airport land use policies as set out in the Borrego Valley Airport Land Use Compatibility Plan, adopted December 2006 (BVALUCP). On November 30, 2009, the Project Proponent received a determination of “No Hazard to Air Navigation” from the Federal Aviation Administration (FAA), thereby indicating that the Project would not conflict with operations at the Airport. In addition, the San Diego County Regional Airport Authority ([RAA](#)) issued a consistency determination on March 2, 2010, indicating that the proposed use is conditionally consistent with the BVALUCP. Additionally, the entirety of the parcel encumbered by MUP 09-012 (APN 141-230-26) will be subject to the restrictions and terms of a County aviation easement.

Portions of the Project are located within Airport Safety Zones 1-6 and Review Area #2 of the BVALUCP; refer to Figure 7, Existing General Plan Land Use Designations /

BVALUCP Review Areas. Pursuant to the BVALUCP, Airport Safety Zones are “based upon general aviation aircraft accident location data...along with data regarding the runway configuration and aircraft operational procedures at Borrego Valley Airport.”

The BVALUCP contains policies aimed at the regulation of land uses within the various Safety Zones and Review Areas identified. Policy BOR.2.4(a), Non-Residential Development Criteria, states that “the maximum acceptable intensity of proposed development within the environs of Borrego Valley Airport is:

- Within Safety Zone 1: 10 people per acre.
- Within Safety Zone 2: 60 people per acre.
- Within Safety Zone 3: 120 people per acre.
- Within Safety Zone 4: 150 people per acre.
- Within Safety Zone 5: 150 people per acre.
- Within Safety Zone 6: No Limit.”

The Project would be unmanned and would require weekly maintenance activities involving only two employees visiting the site once per day. This substantially minimizes the numbers of persons per acre using the Project site. Hence, the Project would substantially promote policies aimed at ensuring public safety with regard to proposed land uses within proximity of the Airport.

In addition, Policy BOR.2.5 identifies Land Uses of Special Concern, which include schools, day care centers, hospitals and health care centers, inmate facilities, hazardous materials storage, and critical community infrastructure. The Project proposes a solar energy facility and associated transmission facilities and does not represent a sensitive land use with regard to public safety. In addition, as the facilities would be self-operating, the daily onsite presence of substantial numbers of employees is not required, and therefore, Project-associated employees would not be subject to long-term exposure to potential Airport operational hazards.

Section 3.2, General Plan Consistency with Compatibility Plan (Subsection 3.2.1(a) Elimination of Conflicts), of the BVALUCP states that “Direct conflicts primarily involve general plan land use designations that do not meet the density of intensity criteria (of the BVALUCP). In addition, conflicts with regard to other policies – height limitations in particular – may exist.” The proposed PV solar panel farm and associated transmission facilities would be consistent with land uses allowed by the existing County General Plan on the affected properties, as noted above.

The proposed facilities on the two main parcels would not exceed (approximately) 35 feet in height, and therefore would not represent a structural height within the vicinity of the Airport that would interfere with existing Airport operations, consistent with Policy BOR.3.4(b). In addition, the Borrego Substation site is located within Review Area 2 of the BVALUCP. In addition, the applicant has coordinated with the San Diego County Department of Public Works (Airports) to discuss the design of the Project and its potential effects on existing operations at the Borrego Valley Airport. Consistent with Policy BOR.3.3, Requirements for Federal Aviation Administration Notification of Proposed Construction, the Project requires an approved FAA Form 7460-1 (Notice of Proposed Construction or Alteration) and a determination of consistency with the BVALUCP.

In addition, Policy 3.5, Other Flight Hazards, of the BVALUCP states that “Land uses that may cause visual, electronic, or wildlife hazards...to aircraft in flight or taking off or landing at the airport shall be allowed within the airport influence area only if the uses are consistent with FAA rules and regulations.” The Project does not propose any features that would result in electronic hazards or hazards to wildlife; however, with regard to visual hazards, the PV solar panels that would be installed with the Project would be constructed as glass panels with a thin, highly-absorptive material to minimize the potential for reflection and retain as much of the solar spectrum as possible. Based in part on the research provided below, Project implementation is not expected to result in hazards relative to glare.

Effects of solar panel glare were analyzed by the FAA for the installation of a 4-megawatt PV solar power generation array adjacent to Denver International Airport (DIA) in Colorado in 2006. A number of tests were performed to analyze glare effects, such as placing sample PV panels at different installation locations and at variable angles. No glare was noted by observers in any of the panel orientations. An aerial observation was also conducted. Reflectivity of the panels was measured four times per day, concluding that 96 percent of the sun’s light was absorbed by the panels, and that the light reflected was dispersed. Since the panels were installed in August 2008, no complaints have been filed with DIA with regard to glare effects from the panels. -A similar solar PV panel project was installed on the Express Hub at the Fresno Airport in Fresno, California. The project involved installation of flat plate PV modules and PV modules that capture and concentrate sunlight onto a solar cell which allow only reflected light from heat. No adverse effects from glare on airport operations have been reported.

Examples of other similar solar panel projects throughout the U.S. and globally have been installed near airports with no impacts on flight operations. Such locations include the Munich Airport in Germany; the Love Field Airport in Prescott, Arizona; and, the San Francisco, [California](#) Airport.

[Furthermore, two additional studies of solar facilities were considered with regard to glare which concluded similar findings of no adverse effect. These include the Panoche Valley Solar Farm Project Glint and Glare Study \(Panoche Report\)¹ and a Technical Memorandum prepared by SunPower Corporation, \(SunPower Report\)². The SunPower report summarized the minimal reflectivity in PV solar panels as follows: “In general, since the whole concept of efficient solar power is to absorb as much light as possible while reflecting as little light as possible, standard solar module produces less glare and reflectance than standard window glass. This is pointed out very well in U.S. Patent #6359212, which explains the differences in the refraction and reflection of solar module glass versus standard window glass. Solar modules use “high-transmission, low iron glass” which absorbs more light, producing small amounts of glare and reflectance than normal glass³.” In addition, the SunPower report concluded that solar glass reflects far less than steel, standard glass, and smooth water. The report indicated that solar glass with an anti-reflective \(AR\) coating would reflect less than 10% of the sunlight energy at a 90-degree incident angle⁴. The proposed Project would use AR coated solar glass panels that are similar to those analyzed in the SunPower report.](#)

[In addition, a report was prepared for the Panoche Draft Environmental Impact Report \(DEIR\) for a 6,000-acre solar farm located in San Benito County, California. The report evaluated PV panel positions at different angles to test potential changes in the amount of reflectivity, evaluating the panel positions from four different key viewpoints. The report concluded in part that, “By nature, PV panels are designed to absorb as much of the solar spectrum as possible in order to convert sunlight to electricity. Reflectivity levels of solar panels are “decisively lower” than standard glass and should not pose a reflectance hazard to viewers.” The proposed Project would be similar to the Panoche project in overall design characteristics and type of solar panels used \(e.g. photovoltaic,](#)

¹ [Panoche Valley Solar Farm Project Glint and Glare Report, prepared by Power Engineers, May 10, 2010.](#)

² [SunPower Corporation Technical Notification #T09014, Solar Module Glare and Reflectance, dated September 29, 2009.](#)

³ [SunPower Corporation Technical Notification #T09014, Solar Module Glare and Reflectance, dated September 29, 2009.](#)

⁴ [SunPower Corporation, Product Awareness Notification #008.02.10, Possible Glare and Reflectance in OV Systems Document #001-46074 Rev *B, April 4, 2008.](#)

fixed solar panels; degree of tilt, etc.). It is therefore anticipated that potential glare effects resulting from proposed Project would be similar and less than significant.

The applicant has submitted FAA Form 7460-1, Notice of Proposed Construction or Alteration, and in response has received from the FAA a determination of “No Impact” for installation of the proposed facilities. Based on the above discussion and findings for glare effects of similar solar PV panel installations, potential Project-related glare effects for all viewers from surrounding vantage points are anticipated to be none to minimal.

As solar generation facilities are not identified as a specific land use evaluated in the BVALUCP for compatibility purposes with regard to the identified Safety Zones, the San Diego County ~~Regional Airport Authority~~ RAA is responsible for making the determination as to the appropriateness of the PV solar facility at the proposed location. An aviation easement will be required of the Project applicant as a condition of approval for the Project. The easement will prohibit reflective surfaces that produce high glare as indicated by the RAA and DPW Airports. As noted above, the ~~Regional Airport Authority~~ RAA has determined that the proposed land use is consistent with the BVALUCP, indicating that, due to the nature of the facilities, Project operation would not interfere with ongoing activities associated with the Airport.

In addition, as the 53-acre-lease parcel and 288-acre parcel are located just north of the Borrego Valley Airport, access to these parcels would require crossing of the Approach Zone for the Airport for construction and maintenance of the Project. The applicant has entered into a fully-executed Option to Lease and Access Agreement with the County Department of Public Works (Airports) to allow for long-term access across the Airport property, thereby providing adequate access to the 53-acre lease parcel and the 288-acre parcel.

In summary, the proposed Project was reviewed to determine if the construction and decommissioning would have increased impacts on glare. The Project would result in a temporary increase in truck traffic and the transport of the solar arrays and construction materials to the Project site. This may temporarily increase glare conditions during construction; however, this increase in glare would be minimal and temporary. Therefore, construction of the proposed Project would not create a new source of substantial glare that would affect daytime views in the area. Impacts would be less than significant.

Based on the technical evidence evaluating the reflectivity of the solar PV solar panels, the proposed Project would not install highly reflective building materials that would

result in a substantial increase in light or glare that would affect the surrounding area, including surrounding houses and public viewpoints. The PV solar panels would not produce reflective light that would create adverse disability or discomfort glare. The proposed Project is in accordance with the County's Guidelines of Determining Significance for Lighting and Glare. In addition, the reduced reflectivity of the PV solar panels with an AR coating would not adversely affect day or nighttime views in the area. The slight increase in glare resulting from the Project would be a less than significant impact.

In addition, to ensure that potential glare impacts are minimized with regard to operations at the Borrego Airport, the County will enforce certain design and operational standards. These standards will require that all light fixtures and light sources be installed so as to comply with the rules and regulations of the FAA or other appropriate successor or government agencies governing height, type, and placement of lights that may affect the safety of aircraft operations into, from, and around the Airport.

3.1.5 Wildland Urban Interface Ordinance

The Project would be consistent with the County's Wildland Urban Interface Ordinance. The Project is located within an area affected by the County's Wildland Urban Interface Ordinance. The Ordinance applies to lands with a high potential for risk of wildfire, and therefore, such lands are subject to additional preventative design measures to reduce the occurrence or spread of wildfire. To reduce the potential for wildfire to occur and to allow for adequate access and onsite circulation of emergency vehicles, Project design includes a 30-foot brush clearing zone (measured inward from the property boundary) on the two main parcels (does not include the shared boundary between the 53-acre-lease parcel and the 288-acre parcel).

In addition, the proposed expansion area at the Borrego Substation would be cleared and grubbed to create a flat building pad. The pad would be permanently surfaced with gravel, thereby avoiding the need for the Project to provide vegetation clearance, as the proposed facilities would be distanced from the property boundary; refer to Figure 3E, SDG&E Borrego Substation – Proposed Expansion Area.

A Fire Protection Plan (FPP) Letter Report ([prepared January 19, 2010, revised September 2010](#)) has also been prepared by the applicant, consistent with County requirements, to address such issues as water supply, access, building ignition and fire

resistance, fire protection systems and equipment, and vegetation management. The County Fire Marshal and Borrego Springs Fire Protection District (BSFPD) have indicated that the Project as designed would meet applicable fire protection requirements and that adequate facilities and personnel are available to serve the Project site.

3.2 Major Use Permit Findings (County Zoning Ordinance)

The County Zoning Ordinance allows photovoltaic solar farms to be located on the Project site subject to the issuance of a Major Use Permit. The required findings support the issuance of a MUP for the Project.

It should be noted that the MUP application does not include the proposed improvements within any of the transmission routes or at the Borrego Substation expansion area. The northern and southern transmission routes and the Borrego Substation parcel are under the ownership of SDG&E or others, not EE Borrego Land, LLC, and therefore, are not considered as part of the MUP application. Improvements proposed within the transmission routes or at the Borrego Substation expansion area would instead be under the permitting authority of the California Public Utilities Commission (CPUC).

Finding 7358a. “The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures with consideration given to:

1. harmony in scale, bulk, and coverage.”

The Project is in harmony in relative development scale, bulk and lot coverage with surrounding properties and is therefore compatible with adjacent land uses.

This finding can be addressed in two parts. The first part, “The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures...” addresses how the proposed development will relate to the existing environment.

Location / Lot Size

The Project area is located in the Borrego Valley, which is in the desert region of northeastern San Diego County. In the Project vicinity, parcels are generally large-acre

parcels with low-density uses; refer to Figure 4, Surrounding Land Uses, and Table 3, Development Characteristics of the Project and Surrounding Uses. The majority of surrounding parcels are designated as Estate – Single Family, which allows low density development (0.1 to 0.4 dwelling units per acre). A number of smaller parcels are located to the south of the Project site, across Palm Canyon Drive, and are generally designated as Office – Low Intensity or Neighborhood/Low Intensity Commercial. Smaller lot sizes are evident within the more developed areas of Borrego Springs.

The Project site is comprised of two main parcels of 288 and 53 acres (lease parcel) and associated areas where infrastructure improvements will occur. The Project does not propose to subdivide the affected parcels, and therefore, no change to existing lot sizes would occur with the Project.

Commercial uses and industrial uses (County General Plan Land Use designations of General Impact Industrial and Limited Impact Industrial) with characteristics similar to that proposed with the Project occur in the surrounding area. The 53-acre-lease parcel is bordered on the north by the 288-acre parcel. To the north and east of these parcels is undeveloped land; to the south is the Borrego Valley Airport; to the west are a commercial palm nursery, and a sand and gravel facility. A microwave tower is also adjacent to the southwest corner of the 288-acre parcel; refer to Figure 2, Aerial Photograph. Land uses to the south across Palm Canyon Drive generally include undeveloped lands interspersed with industrial-type (Limited Impact Industrial) and residential uses.

The PV solar farm Project is classified as a Major Impact Services and Utilities use under the Zoning Ordinance. According to research conducted with the County of San Diego Department of Planning and Land Use, the two main parcels affected by the Project are zoned RR.25, Rural Residential (53-acre-lease parcel) and S92, General Rural (288 acres). The County Zoning Ordinance allows for the proposed use within the RR.25 zone (Section 2185(c)) and the S92 zone (Section 2926(b)) with approval of a MUP. Development of the Project on the identified parcels would therefore be consistent with uses intended by the existing zoning.

General Design Measures

Architectural Design

Architectural design of structures within the land areas surrounding the Project is varied, due to a mixture of use types. Residential uses in the area typically exhibit

ranch-style features with wooden exteriors and roofing, and generally non-decorative elements. Several visible residential uses are constructed in the Spanish style, with stucco exteriors, tile roofing, and arched features. Surrounding commercial and industrial uses generally exhibit more utilitarian features with minimal architectural design (i.e., sand and gravel yard, Borrego Substation, Borrego Valley Airport, self-storage facility).

The Project would involve installation of the PV solar panels on the 288-acre parcel and 53-acre lease parcels with supporting infrastructure that includes two substations, small-scale structures to house the inverter/distributor transformers and switching gear, and associated transmission equipment (i.e., utility poles and transmission lines).

As the Project represents a utility use, Project components would be utilitarian in nature and would not represent structural features such as residential or commercial buildings that would require detailed architectural design or design features intended for visual enhancement. Architectural design of the proposed facilities is not anticipated to significantly contrast with other uses found in the surrounding area.

Materials and Colors

Surrounding land uses exhibit a variety of materials and colors, depending on the land use considered. Materials generally range from wood, stucco, and concrete block for residential and commercial uses. Metal and/or stucco structures are typical of surrounding industrial and agricultural uses. Exterior colors of surrounding structures are typically earthtoned in nature.

Solar Panels

The PV solar panels would be manufactured at an offsite location and transported to the Project site. The panels would be made of a thin-film amorphous silicon material covering a glass pane and would be dark in color and highly absorptive. The materials used to construct the panels are designed to minimize the potential for reflection and retain as much of the solar spectrum as possible, thereby reducing glare. County Airports has reviewed the Project and supports its development. EE Borrego Land, LLC has prepared the required FAA Form 7460-1, Notice of Proposed Construction or Alteration, and received a determination of “No Impact” from the FAA for installation of the proposed facility. As such, potential Project-related glare effects for viewers from surrounding vantage points are anticipated to be none to minimal, and the solar panels would therefore be compatible with adjacent uses, residents, and buildings.

Substations

The onsite substations would include transformers, breakers, switches, meters, and related equipment. Such elements would by nature be constructed of various metals with non-reflective surfaces, similar to those found at the existing Borrego Substation. The substations would also support control rooms that would be enclosed in metal structures. The structures would be painted in earthtones (i.e., light brown or green) to visually blend the buildings into the surrounding landscape and not contrast with the surrounding rural environment.

Inverter Enclosures

Approximately 38 small-scale, aboveground structures would be constructed within the solar panel fields to weatherize inverter/distributor transformers and switching gear. The structures would be constructed of non-flammable materials (i.e., steel) with an earthtone finish. Roofing for these structures would also be metal and of an earthtone finish to reflect the visual character of the surrounding natural environment.

Storage Shed

One storage shed would be constructed on the 288-acre parcel to support maintenance activities. The storage shed would be constructed of either concrete block or metal with an earthtone exterior, similar to the exterior of the inverter enclosures.

Height / Square Footage

Surrounding residential and commercial uses typically range between one to two stories in height. Industrial and/or agricultural uses on surrounding lands support structural elements that generally range from 10 to 30 feet in height, with various elements of greater height, depending on their function. In addition, the communications tower located to the west of the Project site is greater than 100 feet in height. It should also be noted that the Borrego Valley Airport supports several hangars for the storage and protection of airplanes. It is estimated that these facilities range between approximately 100 feet by 350 feet to 550 feet (35,000 s.f. to 55,000 s.f.) in size, with an approximate height of 30 feet. These hangars are located in the western portion of the Airport property and are visible from Palm Canyon Drive.

Table 3 indicates the square footage of structures found within the Project vicinity (reflects only available data). Square footage of buildings in the area varies, due to the type of use, with residential uses generally of smaller scale (generally one-story) and commercial and industrial uses supporting structures of greater square footage.

Solar Panels

The panels would be ~~racks,~~rack mounted in a two-panel system (one panel mounted above a second panel), measuring approximately 10 to 14 feet in total combined width; refer to Figure 3C, Major Use Permit Plot Plan – Elevations/Details. ~~As such, the~~The total height of the two-panel system measured from ground surface would be approximately eight to ten feet. As noted previously, during final engineering and design, a two- or three-panel design may be used depending upon the availability of panels within the market. The height of the panels would be determined during final engineering and would also be based on the design requirements of the Borrego Valley Management Plan design and construction criteria. The distance from the ground to the top of the panel system would not exceed a maximum height of 10 feet. The panels would be tilted at an approximate 30-degree angle, or as otherwise determined necessary during final Project design, and would therefore be fixed and non-tracking. The length of each row of panels would be approximately 300 feet along the east/west axis. Spacing between each row along the vertical axis would be approximately 10.5 feet. A north-south running access road, of minimum 24-foot width and unsurfaced, would be provided approximately every 300 feet between the horizontal rows (approximately 150 feet to either side).

Due to the limited height of the solar panels and the topography of the two main parcels (minimal Project grading required), visibility of the panels within the landscape would be reduced. As sensitive land uses (i.e., residential uses) are not located in the immediate area surrounding the affected parcels, and views to the site would instead generally occur at a distance from developed properties and/or roadways, views of the panels would be limited.

Substations

The overall footprint of each of the Project substations would be approximately 150 feet by 90 feet (13,500 square feet or s.f.), with various supporting equipment installed within this footprint. Overall height of the substations would be approximately 35 feet at the apex. The height of the substations, which would be the largest structures built as part of the Project, would generally be consistent with the height of a two-story single-family residential home. Although the footprint of the substations would be approximately 13,500 s.f., due to the nature of the substation facilities, varied heights, and spacing, the equipment would not represent a solid wall or façade, but instead would allow for views through the equipment, thereby reducing the visual appearance. In addition, similar larger-scale elements or structures are associated with existing

industrial and commercial uses within the surrounding area, including the sand and gravel operation, microwave tower, Borrego Substation, and the Borrego Valley Airport.

The control rooms located at the substations would be approximately 12 by 20 feet (240 s.f.) with an overall height of less than 15 feet. As such, these structures would be small-scale in nature, consistent with land uses generally found in the surrounding area.

Inverter Enclosures

The 38 aboveground structures to house the inverter/distributor transformers and switching gear would be approximately 12 feet by 26.5 feet in size (318 s.f.), and 12 feet in height at the apex. As such, these structures would be relatively small in nature, and would not represent a size or height that would significantly contrast to existing land uses in the surrounding area (i.e., residential, industrial, small-scale commercial uses, etc.).

Storage Shed

The onsite storage shed would be approximately 20 by 30 feet in size (600 s.f.). The structure would be approximately 10 feet in height, similar to the inverter enclosures.

Transmission Facilities

Depending on the transmission route selected, the height of the required utility poles would vary. If the northern route is selected, poles installed would be approximately 45 feet in height. Although these poles would be new poles installed within the 20-foot-wide SDG&E easement, adjoining lands are generally undeveloped (with exception of the commercial nursery adjacent to the west of the 288-acre parcel), and views of the poles would occur from distant properties, thereby minimizing their appearance within the existing landscape. If the southern route is selected, the height of utility poles along Palm Canyon Drive would be increased from approximately 25 feet (existing) to 45 feet (proposed). Poles along Borrego Valley Road would be extended from approximately 40 feet (existing) to approximately 45 feet (proposed). The visual increase in height is anticipated to be minimal and, as similar poles presently exist along both roadways, improvements made with the Project would not cause a substantial change in the existing visual landscape or conflict with the character of surrounding land uses.

Table 3 below gives the development characteristics of properties in the Project area; refer also to Figure 4, Surrounding Land Uses; and, Figures 5 and 6, Existing Views of Surrounding Land Uses.

**TABLE 3
DEVELOPMENT CHARACTERISTICS OF THE PROJECT
AND SURROUNDING USES**

Address	APN	Location Relative to Project Site	Lot Size (acres)	Structure Size (SF)	Structure Height (if available)	Existing Land Use
Project Site	141-230-33	--	104 (53-acre Project portion)	--	--	Vacant
Project Site	141-230-26	--	288	--	--	Vacant
Project Site	141-210-24	--	9	--	--	Vacant
2315 Henderson Canyon Rd.	140-320-29	Northeast	5	1,682	n/a	Multi-family Dwelling
1374 Peg Leg Rd.	140-320-23	Northeast	102	--	--	Miscellaneous
1518 Peg Leg Rd.	140-320-08	Northeast	131	--	--	Miscellaneous
1520 Peg Leg Rd.	140-320-06	Northeast	135	780	n/a	Commercial Condominium
Peg Leg Rd.	141-070-11	Northeast	21	--	--	Vacant Land
2085- N Peg Leg Rd.	141-070-09	Northeast	6	2,106	n/a	Mobile Home Lot
1820 Palm Canyon Dr.	141-230-38	South	191	151,000*	n/a	Borrego Valley Airport
Palm Canyon Dr.	199-060-04	South	9	--	--	Vacant Land
Palm Canyon Dr.	199-060-05	South	30	--	--	Vacant Land
Palm Canyon Dr.	199-060-11	South	61	--	--	Vacant Land
Palm Canyon Dr.	199-060-13	South	58	--	--	Commercial Acreage
Palm Canyon Dr.	199-060-01	South	39	--	--	Vacant Land
Palm Canyon Dr.	199-030-06	Southwest	2	--	--	Vacant Land
1615 Palm Canyon Dr.	199-030-05	Southwest	2	1,053	n/a	Single Family Residence
Palm Canyon Dr.	199-030-04	Southwest	2	--	--	Vacant Land
Palm Canyon Dr.	199-030-03	Southwest	2	--	--	Vacant Land

**TABLE 3 DEVELOPMENT CHARACTERISTICS OF THE PROJECT AND
SURROUNDING USES, CONTINUED**

Address	APN	Location Relative to Project Site	Lot Size (acres)	Structure Size (SF)	Structure Height (if available)	Existing Land Use
1527 Palm Canyon Dr.	199-030-02	Southwest	2	9,000	n/a	Vacant Land
Palm Canyon Dr.	199-030-01	Southwest	2	--	--	Vacant Land
Palm Canyon Dr.	199-020-06	Southwest	5	--	--	Vacant Land
Palm Canyon Dr.	199-020-05	Southwest	5	--	--	Vacant Land
1437 Palm Canyon Dr.	199-020-04	Southwest	5	n/a	n/a	Single Family Residence
Palm Canyon Dr.	199-020-03	Southwest	4	--	--	Vacant Land
Palm Canyon Dr.	199-020-02	Southwest	4	--	--	Vacant Land
Palm Canyon Dr.	199-020-01	Southwest	2	--	--	Vacant Land
Palm Canyon Dr.	199-020-31	Southwest	2	--	--	Vacant Land
Palm Canyon Dr.	141-210-05	West	72	--	--	Agricultural Land
Palm Canyon Dr.	141-210-04	West	74	--	--	Agricultural Land
Palm Canyon Dr.	141-210-21	West	3	--	--	Industrial Acreage (Sand and Gravel Operation)
Palm Canyon Dr.	141-210-22	West	12	--	--	Industrial Acreage (Sand and Gravel Operation)
Palm Canyon Dr.	141-210-06	West	9	--	--	Industrial Acreage (Sand and Gravel Operation)
2299 Borrego Valley Rd.	141-210-19	West	67	1,688	n/a	Mobile Home Lot
2161-2191 Borrego Valley	141-210-02	West	72	693	n/a	Single Family Residence

**TABLE 3 DEVELOPMENT CHARACTERISTICS OF THE PROJECT AND
SURROUNDING USES, CONTINUED**

Address	APN	Location Relative to Project Site	Lot Size (acres)	Structure Size (SF)	Structure Height (if available)	Existing Land Use
Rd.						
Borrego Valley Rd.	141-210-30	West	159	--	--	Vacant Land
Borrego Valley Rd.	141-030-28	Northwest	41	--	--	Vacant Land
1992 Borrego Valley Rd.	141-030-27	Northwest	42	--	--	Miscellaneous
Borrego Valley Rd.	141-060-08	Northwest	310	--	--	Vacant Land
Borrego Valley Rd.	141-060-07	Northwest	310	--	--	Vacant Land
Borrego Valley Rd.	140-290-10	Northwest	214	--	--	Vacant Land
1329 Borrego Valley Rd.	140-290-08	Northwest	77	1,248	n/a	Greenhouse
Henderson Canyon Rd.	140-290-06	Northwest	152	--	--	Vineyard
Borrego Valley Rd.	140-290-04	Northwest	87	--	--	Agricultural Land

n/a: not available

* Total estimated at 151,000 (includes airplane hangars)

THIS PAGE INTENTIONALLY LEFT BLANK.

Source: Google Earth, 2009.





View A: View of existing commercial sand and gravel operation west of Borrego Valley Road.



View B: View looking west to existing communications facilities from 104-acre lease parcel with adjacent commercial nursery.



View C: View of existing residential use looking south from Palm Canyon Drive.



View D: View of existing storage facility looking south from Palm Canyon Drive.



View E: View looking south from Palm Canyon Drive to existing school (Santa Rosa Community Day School).



View F: View looking northeast across Palm Canyon Drive to Borrego Valley Airport.



View G: View looking west to existing single-family residential use along Peg Leg Road.



View H: View looking east to existing single-family residential use along Peg Leg Road.

Grading

Grading of properties on lands surrounding the Project site generally appears to be minimal, as such lands are relatively flat and lacking in varied topography, due to their location within the valley floor. Grading may occur on a site to accommodate various structures, depending on the underlying topography and size of the required building footprint; however, no significant manufactured cut and/or fill slopes are readily visible on properties within the area surrounding the two main Project parcels or affected offsite lands where associated infrastructure improvements would occur.

As stated above, the solar PV panels would be installed in an east-west orientation in parallel rows; refer to Figure 3D, Typical PV Solar Layout. Although the majority of land surface on the two affected parcels is generally flat, limited portions of the 288-acre parcel and the 53-acre lease parcel would be graded to provide a ground surface that can adequately accommodate the PV solar panels. Grading on these two parcels would require an estimated 107,000 c.y. of balanced cut and fill. The remainder of these two parcels would be cleared and grubbed to allow for installation of the panels and associated facilities.

As limited grading would be required to allow for installation of the proposed facilities, the existing onsite topography of the two main parcels would remain largely in its natural state. In addition, the Project would affect only a 53-acre portion of the 104-acre parcel (APN 141-230-33), thereby avoiding disturbance of the existing natural landform on the remainder. Due to the nature of Project grading requirements, the Project would not result in unnatural landforms or significant manufactured cut or fill slopes. Grading proposed with the Project would therefore be consistent with that found on developed properties within the Project area.

Landscape Design

Landscaping in the area surrounding the Project site generally consists of both natural, native landscaping and formal and informal plantings. A variety of landscaping materials are visible, including a range of plants and trees varying in appearance, color, and height. Landscaping on private residential use properties generally appears to be of a well-manicured nature, as compared to non-residential uses, with a common desert theme reflective of the surrounding native landscape. Surrounding lands that support industrial or commercial uses generally support areas of natural vegetation or minimal landscaping. Well-manicured landscaping, typically supporting palm trees combined

with a variety of plantings, are present in the more developed areas of the Borrego Springs community.

Project design does not include the planting of any landscaping materials on any of the affected parcels. Due to the nature of the PV solar facilities, the topography of the ~~three~~ two main parcels, and the relative distances to surrounding developed lands or significant public vantage points, landscape screening is not required or proposed. In addition, Project design includes a 30-foot-wide vegetative clearing from the perimeter of the 288-acre and 53-acre lease parcels to minimize the potential for wildfire to occur and to allow for onsite circulation of emergency vehicles. As such, installation of landscaping along the perimeter of these parcels for screening purposes would not be appropriate; however, considering the visual nature of adjoining developed and undeveloped lands, the absence of perimeter landscaping with the Project would not be inconsistent with the existing visual character.

Operation and Maintenance

Operation and maintenance activities associated with surrounding industrial and commercial uses are assumed to occur during typical daily business hours. Activities occurring at surrounding residences would be typical of single-family residential uses.

The Borrego Valley Airport to the south of the 53-acre lease parcel allows inbound and outbound flights to occur 24 hours per day. The Airport's business office operates Monday through Friday from 8:00 a.m. to 4:00 p.m. In addition, the public restaurant located within the Airport complex operates Tuesday through Friday from 11:00 a.m. to 9:30 p.m. and Saturday/Sunday from 9:00 a.m. to 9:30 p.m. The restaurant is closed during the months of July and August.⁵

The PV solar facilities would operate 24 hours per day, seven days per week, 365 days per year. The facilities would be monitored remotely by EE Borrego Land, LLC, or an affiliated company. Security would be maintained through installation of an 8-foot high chain-link fence that would include one foot of three-strand concertina wire along the perimeter of the 288-acre parcel and the 53-acre-lease parcel. Infrared security cameras, motion detectors, and/or other similar technology, would also be installed to allow for monitoring of the site through review of live 24/7 footage. A security patrol would also be contracted by EE Borrego Land, LLC, or its affiliates for security purposes. Should the security system detect the presence of unauthorized persons, a

⁵ San Diego County website. <http://www.sdcounty.ca.gov/dpw/airports/borrego.html>. Accessed December 8, 2009.

security representative would be dispatched to the facility, and appropriate local authorities would be notified.

It is anticipated that maintenance of the facilities would require the presence of two to five workers, to perform visual inspections and minor repairs and provide educational tours once daily. Overall, minimal maintenance requirements are anticipated, as the panels would operate on their own with little human involvement required. One storage shed, approximately 20 by 30 feet in size, would be constructed near the southwestern corner of the 288-acre parcel to allow for the onsite storage of maintenance equipment and supplies.

On intermittent occasions, the presence of several workers may be required if major repairs or replacement of equipment is required; however, due to the nature of the facilities, such actions are anticipated to be infrequent. Occasional equipment replacement or refurbishing may be conducted. Refurbishing activities are planned at periods of 5 to 10 years for the inverters/transformers. Refurbishment of the inverters and transformers would require approximately two days for a crew of four personnel, utilizing one or two utility vehicles.

To allow for ongoing maintenance of the solar panels, connection to the public water system is proposed. The Project would connect to an existing Borrego Springs Water District-owned 10-inch water line in Palm Canyon Drive and would extend a private line to the southwest corner of the 53-acre-lease parcel. The private line would then be extended within the interior of the site to the onsite storage building. This line would be used to fill the water trucks needed for periodic maintenance of the facilities.

An estimated 288,750 gallons (0.9 acre-feet) of water would be required every two years for dust suppression purposes. ~~It~~ ~~It is also~~ ~~is~~ anticipated that the solar PV panels would be washed ~~approximately 2~~ up to four times per year to remove dust particles and other buildup to ensure optimum solar absorption. As such, the Project would result in a minimal demand for public water. An adequate water supply is available. Minimal amounts of water [~~(less than approximately 700,000-800,000~~ gallons per year (2.1 acre-feet)], or the rough equivalent of ~~six~~ approximately five single-family homes~~]~~ would be used to clean the panels on an infrequent basis. Due to the highly absorptive nature of the surface and underlying soils, water would run off the surface of the panels and absorb quickly into the ground surface, avoiding runoff and soil erosion.

Panel cleaning would be conducted by EE Borrego Land, LLC, or its subsidiaries or subcontracted labor and would consist of 3 to 4 cleaning vehicles and associated crews.

A team of 10 to 12 personnel would perform the required cleaning activities over an anticipated period of 3 to 4 weeks.

Table 4, Anticipated Maintenance Schedule, summarizes maintenance timing and activities for the Project.

TABLE 4
ANTICIPATED MAINTENANCE SCHEDULE

Activity	Frequency
System Monitoring (Remote)	Continuous
Physical System Inspection	Daily to Individual Locations
Panel Cleaning	0 to 24 Annually
Inverter Maintenance	Per Manufacturer's Specifications
Transformer Maintenance	Per Manufacturer's Specifications

As maintenance of the PV solar facilities would generally be infrequent, such activities are not anticipated to disturb surrounding land uses in the area. Maintenance would largely occur onsite, thereby minimizing any disruption to adjacent landowners. In addition, ongoing operation of the solar farm would require the limited daily onsite presence of two employees using one maintenance vehicle, thereby generating two daily vehicle trips (to and from the site). As such, the operation and maintenance of the Project is considered to be compatible with surrounding land uses.

Occupancy Rates

According to the Year 2000 U.S. Census Bureau, there were an estimated 2,535 housing units within the community of Borrego Springs. Approximately 582 of these were single-family owner-occupied homes. Overall occupancy rates for the area were not available;⁶ However, it should be noted that the Borrego Springs area supports many recreational opportunities and natural amenities that attract large numbers of tourists on an annual basis. Many visitors to Borrego Springs own second homes in the community, particularly where housing is tailored to this population (i.e., the Roadrunner Club).

The Project would not result in residential construction, and therefore, would not make available new housing opportunities within the community of Borrego Springs or surrounding areas. Therefore, no new housing would be constructed with the Project

⁶ U.S. Census Bureau. <http://factfinder.census.gov>. Accessed December 2, 2009.

that could potentially contribute to an overstock of housing or a related decrease in area occupancy rates, thereby affecting the local housing market. Future occupancy rates would be influenced by a number of factors, including population growth within the community, demand for housing, available housing supply, and economic conditions, among other potential factors; however, the Project would not have an adverse effect on housing occupancy rates, or adversely alter the local housing market, due to the nature of the proposed use.

The second part of the finding, "...harmony in scale, bulk, and coverage" addresses how the Project would visually relate to the surrounding built environment.

Bulk and Scale

An evaluation of bulk and scale includes an analysis of the visual appearance of structures, relative to other existing development in the surrounding area. Visual bulk and scale of surrounding structures varies depending on the type of use. Residential and commercial uses tend to be of smaller scale (generally one to two stories in height) and visually horizontal in nature, while agricultural and industrial uses generally support structural elements of greater bulk and scale within the visual landscape. The Airport property supports a number of large-scale airplane hangars, with associated maintenance facilities, and an administrative building with offices and a restaurant. These structural features have visible bulk and scale within the landscape, particularly as adjoining lands are undeveloped. In addition, the sand and gravel operation supports a number of elements of varying bulk and scale, due to the nature of the facilities, including associated equipment and miscellaneous supporting structures (i.e. storage). The communications tower to the west of the Project is not visually dominant with regard to bulk, as the main structure consists of a low-lying building; however, as the communications tower rises over 100 feet in height, the scale is greater than other elements within the surrounding landscape, and therefore, the tower has greater visibility. Refer to Figures 5 and 6 which show the bulk and scale of surrounding land uses.

It is anticipated that the apparent visual bulk and scale of the proposed Project facilities would generally be consistent with that of surrounding uses, due to the design requirements of the solar facilities and associated infrastructure, structural/equipment heights, and required development regulations of the applicable zones.

The PV solar panels would be rack mounted in a two-panel configuration, measuring approximately 10 [to 14](#) feet in total combined width. Total height of the two-panel

system measured from ground surface would be approximately ~~8-eight to ten~~ feet. As previously mentioned, during final engineering and design, a two- or three-panel design may be used depending upon the availability of panels within the market. The height of the panels would be determined during final engineering and would also be based on the design requirements of the Borrego Valley Management Plan design and construction criteria. The distance from the ground to the top of the panel system would not exceed a maximum height of 10 feet. As such, the solar panels would be low-lying and would not be of significant scale. The panel configurations are also not of significant bulk, as they are constructed of a thin-film amorphous silicon material covering a glass pane. Due to the limited height of the solar panels and the onsite topography, ~~of the three main parcels,~~ visibility of the panels within the landscape would be further reduced.

In addition, the structural elements (substations, inverter enclosures, storage shed) would be dispersed within the approximate 341-acre area of the 288-acre and the 53-acre lease parcels. The substations would reach an approximate 35 feet in height at their apex, with the other structures ranging between 10-12 feet in height. As these facilities would be relatively low-lying within the landscape and limited in height, they are not considered to be of significant scale that would be inconsistent with surrounding land uses or community character. In addition, these elements would range from approximately 600 s.f. to 13,500 s.f., and would not be of significant visual bulk, due to their function and utilitarian design.

All utility poles installed or retrofitted with the Project would ultimately range between 40 to 45 feet in height, constructed of steel and would be of limited diameter. As such, the poles would have a vertical emphasis and would not be considered to exhibit substantial visual bulk. Although the Project would either install new utility poles (northern transmission route) or replace or retrofit existing utility poles (Palm Canyon Drive and Borrego Valley Road), the poles would not be of substantial scale with regard for typical utility poles that presently allow for utility transmission within the Borrego Springs community, as well as structural elements associated with other agricultural uses and equipment and industrial type uses within the surrounding area.

Building Coverage

Building coverage is generally expressed as a percentage and represents the area of land covered by the footprint of a building. Building coverage is calculated as the building area divided by total lot area. The building footprint does not include paved areas, such

as driveways or parking areas or walkways around structures, as defined by Section 1110 of the County Zoning Ordinance.

Many undeveloped lands are present in the area surrounding the Project site, and therefore, do not support buildings; refer to Figure 2, Aerial Photograph. The majority of surrounding developed lands are large-acre parcels with structures of varied square footage, depending on the use (i.e., single-family residential versus industrial); refer to Table 3, Development Characteristics of the Project Site and Surrounding Uses. As lot sizes generally decrease south of Palm Canyon Drive and in the more developed areas of Borrego Springs, building coverage increases.

Of particular consideration is the Borrego Valley Airport, as it is immediately adjacent to the 53-acre lease parcel. The property totals approximately 191 acres with existing onsite structures totaling an estimated 151,500 s.f. (includes airplane hangars). As such, building coverage is estimated to be approximately 1.8 percent (151,500 s.f./8,329,100 s.f.).

As stated earlier, two substations and approximately 38 supporting inverter enclosures would be constructed on the 288-acre parcel and the 53-acre lease parcel. Each substation (building footprint) would total approximately 13,500 s.f., or 27,000 s.f. overall. The inverter enclosures would be approximately 318 s.f., or a total of 12,084 s.f. (38 x 318 s.f.). In addition, the storage shed would total approximately 600 s.f. As the total land area affected with these two parcels would be approximately 341 acres, overall building coverage would be an estimated 0.26 percent (39,684 s.f./14,810,400 s.f.). As such, Project building coverage would represent only a fractional portion of the affected parcels, consistent with the generally rural character of surrounding lands.

In addition, the Project would involve the installation of PV solar panels on racks, mounted in a two-panel system (one panel above a second panel; refer to Figure 3C, Major Use Permit Plot Plan – Elevations/Details). The panel arrays would be oriented along an east-west axis with the panels facing generally to the south. The length of each row of panels would be approximately 300 feet along the east/west axis. Spacing between each row along the vertical axis would be approximately 10.5 feet. Although from an aerial perspective, the panels would appear to cover a substantial surface land area, the panels would be mounted in a two-panel system (one panel mounted above a second panel), thereby minimizing the footprint, or coverage, of each panel rack.

The appearance of the above-described Project elements within the landscape is not anticipated to significantly detract from or contrast with the existing visual character

and/or quality of the surrounding neighborhood, community, or localized area. The location, size, design, and operating characteristics of the proposed use would be compatible with adjacent uses, residents, buildings, and structures with consideration given to harmony in scale, bulk, and coverage.

For the reasons above, the Project is considered to be consistent with this finding.

The following discussion summarizes the Project's conformance to the remaining findings required for approval of a Major Use Permit, pursuant to Section 7358a of the County Zoning Ordinance.

Finding 7358a. *"The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures with consideration given to:*

2. The availability of public facilities, services, and utilities;

The Project would be fully compatible with adjacent uses because it would not impose major demands on public facilities, services, or utilities.

Schools

The Project would result in the installation and operation of a PV solar farm for the generation and transmission of solar-generated energy. The Project would not result in the construction of housing or other uses that would generate additional population increasing the demand for educational services. As such, the Project would not affect the availability or provision of educational services within the Borrego Springs community.

Fire Protection Services

The areas affected by the Project would be served by the Borrego Springs Fire Protection District (BSFPD). The District covers approximately 305 square miles and is served from one station, located at 2324 Stirrup Road in Borrego Springs, approximately 2.4 miles northwest of the southwest corner of the 53-acre-lease parcel. The Project is not expected to increase the need for fire protection services or staff in the area served by the BSFPD. Adequate facilities and personnel are available to serve the Project.

Lands affected by the Project are located within the County's Wildland Urban Interface area. As such, Project design provides for a 30-foot wide perimeter brush clearing zone on the 288-acre parcel and 53-acre-lease parcels to reduce the potential for wildfire to

occur and/or spread (does not include the shared boundary between the 53-acre-lease parcel and the 288-acre parcel). In addition, a fire hydrant would be installed at the southwesterly corner (entrance) of the 53-acre lease parcel.

The Project has been designed to further mitigate for potential impacts to the safety of persons and property pursuant to a County-approved Fire Protection Plan (FPP) Letter Report ([prepared January 2010, revised September 2010](#)). The FPP Letter Report addresses water supply, access, building ignition and fire resistance, fire protection systems and equipment and vegetation management with regard to fire code requirements.

Police Protection Services

The lands affected by the Project would be served by the County of San Diego Sheriff's Department from its station located at 571 Palm Canyon Drive in Borrego Springs, approximately 2.9 miles to the southwest of the southwest corner of the 53-acre-lease parcel. As previously stated, the affected properties would be monitored remotely by EE Borrego Land, LLC, or an affiliated company, thereby reducing the potential for trespassers or vandals to access the sites and decreasing the overall need for intervention by law enforcement officers.

Water Service

The use of potable water is not required for long-term operation of the proposed facilities. The Borrego Springs Fire Protection District will require installation of a fire hydrant at the southwesterly corner (entrance) of the 53-acre lease parcel. To allow for annual maintenance of the solar panels (~~0-2~~[washing two to four times per year](#)), connection to the public water system via hose bib at the storage building is proposed. Minimal amounts of water (~~less than 800,000~~[700,000](#) gallons per year [\(2.1 acre-feet\)](#), or the [rough](#) equivalent of ~~six~~[approximately five](#) single-family homes) would be used to clean the panels on an infrequent basis. [An additional 288,750 gallons \(0.9 acre-feet\) would be required every two years for dust suppression purposes.](#) Water would be provided by the Borrego Water District, and an adequate water supply is available to meet Project water demand. To provide water for washing the panels, the Project would connect to an existing Borrego Springs Water District-owned water line in Palm Canyon Drive and extend a private line north along the access road to the 53-acre lease parcel. The private water line would then extend to the proposed onsite storage shed on the 288-acre parcel; refer to Figure 3B, Major Use Permit Plot Plan.

Wastewater Service

Due to the nature of the Project, no wastewater disposal facilities or connection to the public system for such services is required or proposed. The Project would not generate any wastewater that would require the need for treatment or disposal, and therefore, would not affect existing or future wastewater treatment services or facilities within the Borrego Springs community.

Solid Waste Disposal

Due to the nature of the Project, the need for solid waste disposal service is not anticipated, with the exception of disposal of minimal amounts of debris during construction, as the panels would be assembled prior to being delivered to the site. Allied Waste Services is the community's franchise hauler for refuse, recycling and green waste materials. Any construction debris would be transported to the Borrego Springs Landfill, located at 2449 Palm Canyon Drive, approximately 0.9 miles to the southeast of the southeast corner of the 53-acre-lease parcel. The Landfill has adequate capacity to accept the limited solid waste that may be generated by construction and/or operation and maintenance of the Project facilities.

Other Utilities and Services

Due to the nature of the Project, operation of the proposed facilities is not expected to result in a significant increase in demand for other public utilities or services such as electricity, sewer service, schools, recreational facilities, or other services (i.e., libraries, social services, etc.). No residential, commercial, industrial, or other land uses that would potentially generate a demand for additional water or wastewater treatment services are proposed as part of the Project.

For the reasons above, the Project is considered to be consistent with this finding.

Finding 7358a. "The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures with consideration given to:

3. The harmful effect, if any, upon desirable neighbor character:

The Project would not have a harmful effect on desirable neighborhood character and therefore is compatible with adjacent uses. The Project proposes construction of a PV solar energy electrical generation facility to provide electricity for public consumption. The solar panels would be installed on properties that are generally located in an area that supports undeveloped/disturbed lands or low-density uses, with no residential uses

immediately adjacent to the affected properties. A number of other industrial-type uses are also present in the surrounding area, including a microwave tower, located adjacent to the southwest corner of the 288-acre parcel, and a commercial sand and gravel yard, located further west of the 288-acre parcel. A large-scale commercial nursery is currently in operation directly to the west of the 288-acre parcel. In addition, an existing utility easement runs just north of the 288-acre parcel and supports the operation of such facilities in the area (i.e., Borrego Substation). There are also existing aboveground transmission lines along Palm Canyon Drive and Borrego Valley Road.

The PV solar panels and associated support facilities would be generally distanced from major roadways and would be low-lying features within the landscape. Limited grading and grubbing/clearing would be required to accommodate the panels and the transmission facilities, thereby allowing existing topography to remain largely in its natural state, rather than resulting in a highly manufactured landscape that would be inconsistent with the existing visual character of the surrounding area.

Short-term noise impacts would be associated with construction activities required for the Project. Construction-related short-term noise levels would be higher than existing ambient noise levels in the Project area, but would cease once Project construction is completed. All construction would be required to comply with applicable restrictions on hours and standards for such activities, per established County of San Diego noise level thresholds, to reduce the potential for significant noise impacts to occur. In addition, sensitive receptors (i.e., residential uses, schools, etc.) are not located within close proximity to the Project, and therefore would be distanced from any construction-related noise. The technical Noise Analysis prepared for the Project by LDN Consulting, Inc. (June 2010) determined that, due to the distance of the Project sites from existing (legal) dwelling units, no significant noise impacts would result from Project-related grading or construction activities, thereby avoiding any adverse effects on sensitive land uses.

Long-term operation of the solar PV panels and associated facilities is not anticipated to generate significant noise levels that would exceed local noise level thresholds. To reduce potential noise effects on surrounding sensitive noise receptors, the two substations and the inverter structures would be set back from all property lines a minimum of 105 feet. This would ensure that noise generated by any onsite mechanical equipment (e.g. transformers, air conditioning units, etc.) would be reduced to below County thresholds for noise levels. Refer also to the Noise Analysis prepared in June 2010 (available under separate cover).

In addition, as Project-generated traffic would be generally limited to two employees visiting each of the sites on a daily basis for maintenance purposes, the Project is not anticipated to contribute to a significant increase in noise levels along area roadways above existing conditions. The proposed facilities would also be constructed within an environment where noise is presently generated by daily operation of the Borrego Valley Airport, as well as by traffic traveling along Palm Canyon Drive and Borrego Valley Road. As such, no significant noise effects that would adversely affect neighborhood character are anticipated.

In addition, exterior lighting for the Project would be limited to that required for maintenance and security purposes to minimize effects on surrounding land uses. All Project lighting would be shielded and directed downward to minimize the potential for glare or spillover onto adjacent ownerships and/or open space lands. All lighting would conform to County of San Diego outdoor lighting requirements. It should be noted that the proposed use represents a relative decrease in the amount of potential light pollution produced, as compared to if the 53-acre-lease parcel or the 288-acre parcel were developed with residential uses, as allowed by the existing Multiple Rural Use designation.

The Project is not considered to otherwise result in the harmful effect upon desirable neighbor character. For the reasons above, the Project is considered to be consistent with this finding.

Finding 7358a. "The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures with consideration given to:

4. The generation of traffic and the capacity and physical character of surrounding streets:

The Project's generation of traffic in the context of surrounding streets is compatible with surrounding uses. Due to the nature of the Project, the public roads generally affected by the Project include Palm Canyon Drive and Borrego Valley Road. Characteristics of these roadways are briefly described below.

Palm Canyon Drive (SA 180)/(SC430) is currently a two-lane road and is oriented in an east/west direction in the vicinity of the Project site. This road is classified as a Major Road in the County's General Plan Circulation Element and as a Community Collector (Borrego Valley Road to Peg Leg Road) in the proposed General Plan Update.

Borrego Valley Road (SC 470) is currently a two-lane road and is oriented in a north/south direction in the vicinity of the Project site. Borrego Valley Road extends from Palm Canyon Drive to the south northward to Henderson Canyon Road. This segment is classified as a Light Collector in the County's General Plan Circulation Element and as a Light Collector (Henderson Canyon Road to Rango Way) in the proposed General Plan Update.

Traffic along Palm Canyon Drive varies and supports heavier traffic volumes during typical peak hours and during months when tourist traffic increases (i.e., winter and spring, and the blooming period of desert wildflowers). Borrego Valley Road supports moderate volumes of traffic, due to the generally large-acre parcels with lower-density development that the road provides access to.

With Project implementation, a temporary minor increase in traffic may occur along area roadways during the construction phase, as workers and materials are transported to and from the affected sites. Approximately 30 construction vehicles trips per day are anticipated to take place during Project construction, with up to a total of 3,000 construction vehicle trips anticipated to occur during the entire construction period; however, traffic generated by Project construction activities is not expected to cause a significant short-term increase in area traffic volumes, due to the nature and scope of the construction activities required (i.e., limited grading, delivery of pre-constructed panels to the sites, etc.) and the existing traffic volumes along Palm Canyon Drive and Borrego Valley Road. With the exception of installation of new utility poles or alteration of existing poles along Palm Canyon Drive and/or Borrego Valley Road, all Project construction activities would occur onsite, thereby minimizing potential conflicts with or interruption of area traffic flow or vehicular circulation.

In addition, long-term operation of the facilities would not generate a substantial number of vehicle trips. It is estimated that two employees (one maintenance vehicle) would visit the sites on a daily basis for inspection and maintenance purposes, or as otherwise needed. This represents a vehicle trip generation rate of two average daily trips (ADT) for Project traffic (one vehicle making one daily trip to and from the site, or two overall trips per day, seven days per week). As such, traffic generated by long-term operation of the facilities is not anticipated to exceed, either individually or cumulatively, a level of service standard established by the County of San Diego. In addition, on intermittent occasions, the presence of several workers may be required if major repairs or replacement of equipment is required; however, due to the nature of the facilities, such actions are anticipated to be infrequent.

Panel cleaning would also be conducted by EE Borrego Land, LLC, or its subsidiaries or subcontracted labor and would require an estimated four vehicles and associated crews. A team of 10 to 12 personnel (four maintenance vehicles) would perform the required cleaning activities ~~approximately 2~~up to four times per year. It is anticipated that cleaning of the panels would occur over a period of four weeks. Panel-cleaning activities are anticipated to generate approximately 8 ADT [4 vehicles x 2 trips/day (to and from the site)] during the four week period. Therefore, each cleaning event would generate an estimated 160 vehicle trips total ([4 vehicles x 2 trips/day] x 5 days/week x 4 weeks), or a maximum of ~~320~~640 vehicle trips over a one-year period if the panels were washed ~~twice~~up to four times. Therefore, traffic generated by panel cleaning activities would be minimal and would not adversely affect circulation or contribute a significant number of vehicle trips along area roadways.

Project traffic would not result in a change in air traffic patterns at the Borrego Valley Airport or cause substantial safety risks with regard to traffic as the result of access to and from the 53-acre-lease parcel and the 288-acre parcel across the Airport Approach Zone. Access required to the properties during construction and/or for ongoing maintenance purposes would be intermittent, with a minimal number of vehicles crossing the area. All Project-related access and operational procedures would comply with applicable FAA safety regulations and County airport operation requirements. As previously stated, on November 30, 2009, the Project Proponent received a determination of “No Hazard to Air Navigation” from the FAA, thereby indicating that the Project would not conflict with operations at the Airport. In addition, the entirety of the parcel encumbered by MUP 09-012 (APN 141-230-26) will be subject to the restrictions and terms of a County aviation easement.

It is not anticipated that the Project would generate increased levels of traffic that would result in a change in existing community character or that would be incompatible with existing land uses. For the reasons above, the Project is considered to be consistent with this finding.

Finding 7358a. “The location, size, design, and operating characteristics of the proposed use will be compatible with adjacent uses, residents, buildings, or structures with consideration given to:

5. The suitability of the site for the type of and intensity of use or development which is proposed; and, physical characteristics of the site (i.e., level with adequate drainage) and suitability of the proposal for the site;

The Project, as proposed, will be suitable to the site with regard for the type of and intensity of use and development, and therefore compatible with adjacent uses. The Project represents a land use that would be consistent with the existing regulatory and physical characteristics of the affected properties and surrounding uses. The facilities would be constructed within a generally rural environment and would affect lands that are previously disturbed and/or undeveloped. Existing land uses in the surrounding area are generally either undeveloped/disturbed or support limited industrial or commercial land uses. No residential uses are present on lands immediately adjacent to any of the ~~three~~-affected parcels. Directly west of the Airport, lands are designated as Limited Impact Industrial on the County General Plan Land Use Map. In addition to the Airport, a number of other industrial-type uses are also present in the surrounding area, including a microwave tower, located adjacent to the southwest corner of the 288-acre parcel, and a commercial sand and gravel yard, located west of the 288-acre parcel. A large-scale commercial nursery is currently in operation directly to the west of the 288-acre parcel. In addition, an existing utility easement runs just north of the 288-acre parcel and supports the operation of such facilities in the area (i.e., Borrego Substation). There are also existing aboveground utility poles along Palm Canyon Drive and Borrego Valley Road, which would be extended and/or replaced with similar poles with the Project.

The proposed facilities are not anticipated to conflict with any land use plan or policy adopted for the purpose of avoiding or mitigating an environmental effect, and would be compatible with surrounding existing uses with regard to typical operating characteristics, the scale of the facilities, and the general character of the surrounding environment.

In addition, the Project is considered to be a compatible use with the BVALUCP and would not require a change to the existing underlying General Plan land use or zoning designations of any of the parcels affected by the Project. The San Diego County Regional Airport Authority determined that the Project is considered to be a compatible land use with the BVALUCP and activities conducted at the Airport (letter dated March 2, 2010).

Drainage Characteristics

The Flood Hazard Map for Borrego Valley Alluvial Fans shows that the Project sites lie along the valley floor of the Coyote Canyon alluvial fan within the Borrego Valley. Alluvial fans typically occur in arid environments where steep mountains encounter a

flat valley floor. These areas typically experience infrequent but intense storms. This particular combination of topography and climate tends to produce flash floods yielding high sediment loads along the steep mountainside, while channel braiding and sediment deposition occur along the gentle slopes of the valley floor.

There are no existing storm drain facilities on or within the immediate vicinity of the Project site, except for two drainage culverts along Palm Canyon. No drainage structures are proposed with the Project, due to the rural nature of the area and the lack of existing storm drain facilities or open channels within the immediate Project vicinity.

No streams or rivers are present on any of the Project sites. Any grading required for installation of the solar panels would not significantly alter the existing drainage pattern of any of the sites in a manner that would result in substantial erosion or siltation either on- or offsite. Similarly, installation of any required transmission lines would not create the potential to significantly alter existing drainage patterns.

In addition, the Project location offers optimal conditions for the type of use proposed. As a desert environment, the typical atmospheric conditions in Borrego Springs allow for an abundant source of sunshine on an annual basis, thereby representing a sustainable, renewable, and reliable source for solar energy production.

For the reasons above, the Project is considered to be consistent with this finding.

6. Any other relevant impact of the proposed use:

The potential for subsequent changes to the existing regional environmental setting resulting from similar development requests encouraged by the Project is not considered to be significant. Limitations that would prevent other area property owners from following suit might include zoning or land use designations that do not allow for similar uses; a potential lack of community support for similar development; or, the lack of an adequate demand or additional population on a local or regional basis to support the additional need for increased energy supplies. If proposed, similar development proposals within the Project area would be required to go through the County's review process to determine consistency with the General Plan, Zoning Ordinance, and other applicable plans and policies, and would be subject to the goals and policies established by the Desert Subregional Plan.

For the reasons above, the Project is consistent with this finding under Section 7358(a) that the Project be compatible with adjacent land uses.

Finding 7358b. That the impacts, as directed in paragraph “a” (of this section), and the location of the proposed use would be consistent with the San Diego County General Plan.

As discussed more fully above, the Project is fully consistent with, and strongly supports the goals, objectives and policies set out within, the current General Plan, and the Desert Subregional Plan.

Finding 7358c. That the requirements of the California Environmental Quality Act (CEQA) have been complied with.

The Project is in the process of meeting the requirements of CEQA. For the reasons discussed in this Land Use Compatibility Analysis, the proposed use and Project design would be compatible with existing adjacent uses. Pursuant to Section 7358a of the County Zoning Ordinance, certain required findings have been made to demonstrate the Project’s consistency with approved land use regulations and compatibility with existing land uses. All impacts identified as significant (i.e., biological and cultural resources) would be reduced to less than significant with implementation of the proposed mitigation measures. As such, the Project as proposed would comply with the requirements of CEQA.

3.3 Potential to Induce Similar Land Uses

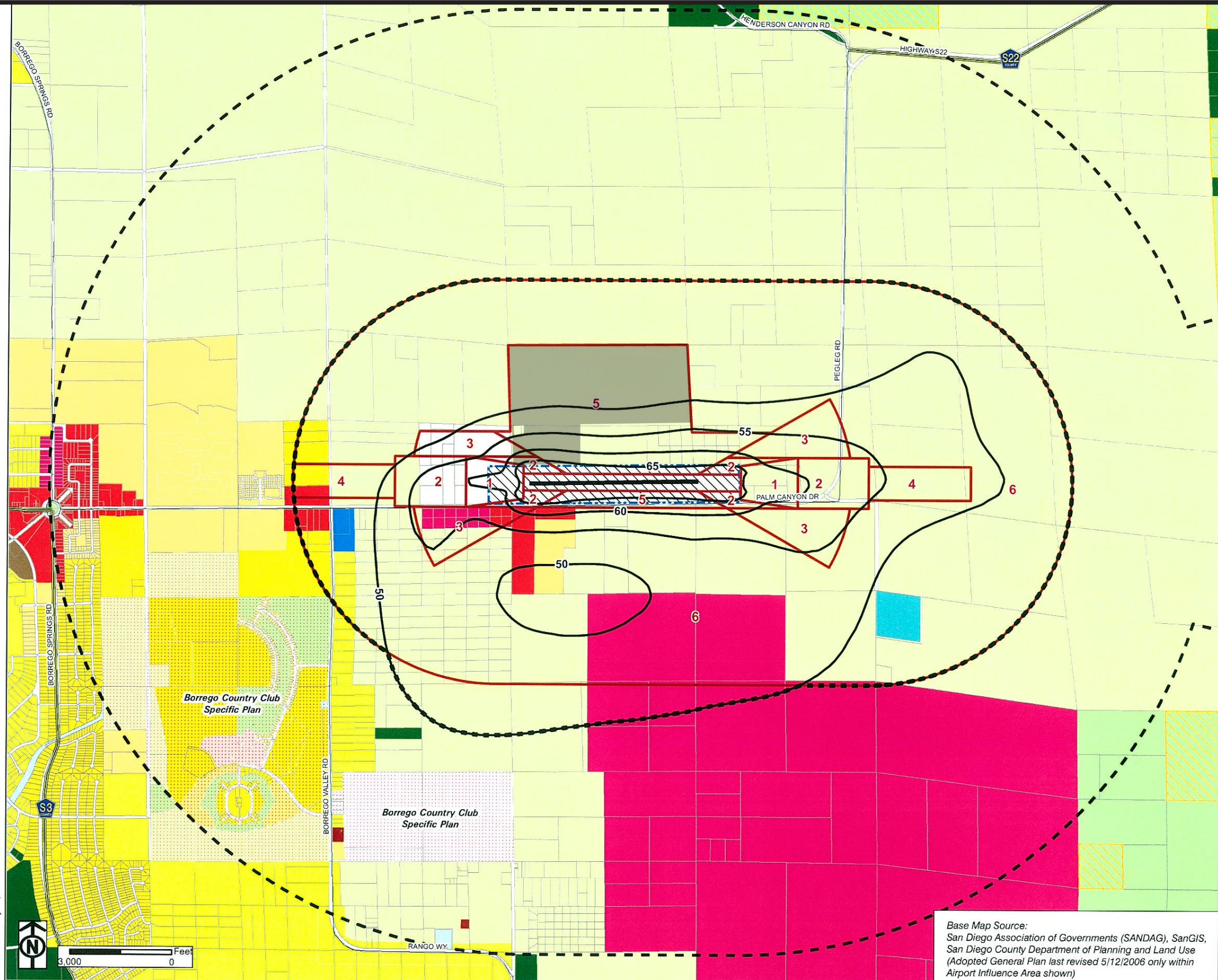
As previously stated, the PV solar farm Project is classified as a Major Impact Services and Utilities use. According to research conducted with the County of San Diego Department of Planning and Land Use, the two main parcels affected by the Project are zoned RR.25, Rural Residential (53-acre-lease parcel) and S92, General Rural (288 acres). The County Zoning Ordinance allows for the proposed use within the RR.25 zone (Section 2185(c)) and the S92 zone (Section 2926(b)) with approval of a MUP. Development of the Project on the identified parcels would therefore be consistent with uses intended by the existing zoning.

All future development proposals on lands in the Project vicinity would be reviewed by the County (and the Community Planning Group) for consistency with the General Plan, Zoning Ordinance, and other applicable policies and regulations. Future projects for similar solar facilities within the Borrego Springs area would be required to either demonstrate that such a use is allowed by right, or to obtain approval by providing justification for such a request. As such, it is anticipated that future requests for the development of similar clean energy, solar generation projects, unless otherwise

allowed under existing regulatory land use conditions or as indicated with the upcoming General Plan Update, would not be readily approved by the County without consideration and review for land use compatibility. It should be noted that atmospheric conditions (i.e., plentiful sunshine) and large-acre, undeveloped properties presently exist in the community and could support construction of solar energy facilities if proposed; however, no such development proposals have recently been submitted to or considered by the County for the Borrego Springs area, according to current County data available to the public.

The Project would occur on privately-held lands (with exception of the 53-acre lease parcel) and would be allowed with approval of an MUP. As such, the Project is not anticipated to directly induce the request for similar solar energy projects in the Borrego Springs community or in surrounding areas beyond that which is allowed under existing conditions.

Produced: January 24, 2007



- Review Area 1
 - Review Area 2
 - Noise CNEL (with dB #)
 - Safety Zone
 - Airport Property
 - Federal Property
 - Anza-Borrego Desert State Park
- General Plan Land Use Designations:**
- Estate - SF (0.1 - 0.4 d.u./ac.)
 - Very Low Density Residential - SF (0.41 - 1.0 d.u./ac.)
 - Low Density Residential - SF (1.1 - 3.0 d.u./ac.)
 - Low-Medium Density Residential - SF (3.1 - 8.0 d.u./ac.)
 - Medium Density Residential - MF/MHP (8.1 - 12.0 d.u./ac.)
 - Medium-High Density Residential - MF (12.1 - 20.0 d.u./ac.)
 - High Density Residential - MF (20.1 - 40.0 d.u./ac.)
 - Very High Density Residential - MF (>40.0 d.u./ac.)
 - Mixed Use - Low Intensity (1.0 - 20 d.u./ac.)
 - Mixed Use - High Intensity (>20 d.u./ac.)
 - Commercial Recreation
 - Neighborhood/Low Intensity Commercial
 - Regional/High Intensity Commercial
 - Office - Low Intensity
 - Office - High Intensity
 - Institutions/Public/Semi-Public
 - Education (K - 12)
 - Hospital/Health Care
 - Light Industry/Business Park
 - Extractive Industry
 - Heavy Industry
 - Open Space/Parks/Golf Course/Vacant
 - Tribal Lands
 - Agriculture (>10 ac. parcels)
 - Junkyard/Dumps/Landfills
 - Transportation and Utilities
 - Specific Plan Area
 - Water
 - Project Site

Base Map Source:
San Diego Association of Governments (SANDAG), SanGIS,
San Diego County Department of Planning and Land Use
(Adopted General Plan last revised 5/12/2006 only within
Airport Influence Area shown)

4.0 Conclusions

Project design would result in the installation of a PV solar farm in the Borrego Springs area. Project elements required for the proposed generation and transmission of energy would not be large-scale in nature, and are not considered inconsistent with the general size, massing, building coverage, scale, color, or building materials of other land uses found in the vicinity of where the Project would be located. The Project would also not significantly increase levels of traffic along area roadways that would result in a significant change in existing community character. Although the proposed development would alter the existing visual character of the landscape from that which presently exists, the Project would not physically divide the community or significantly alter existing or anticipated land use patterns from that intended by the County for the Project sites or other properties within the Borrego Springs area.

With regard to land use consistency, it was determined that the Project as designed would not result in an inconsistency with any goals, standards, or policies as given in the County General Plan, or Desert Subregional Plan, as well as other applicable land use regulations and/or policies. In addition, the Project would meet the findings for a Major Use Permit required by the County Zoning Ordinance.

As determined by this Land Use Compatibility Analysis, the Project is considered to be compatible with the existing character and land uses of the surrounding area and the Borrego Springs community.

5.0 References

Borrego Springs Community Plan (Draft – July 2009).

Borrego Valley Airport Land Use Compatibility Plan (December 2006).

Boyle Engineering Corporation. Borrego Valley Flood Management Report. October, 1989.

County of San Diego General Plan.

County of San Diego General Plan Update.

County of San Diego Zoning Ordinance. Updated with Ordinance Update No. 80, October 2009.

County of San Diego Wildland Urban Interface Ordinance. Ordinance No. 9670.

Desert Subregional Plan (Part XXI). Amended January 11, 1995.

U.S. Census Bureau. <http://factfinder.census.gov>. Accessed December 2, 2009.

6.0 Report Preparers

RBF Consulting

Alex H. Jewell, AICP, LEED AP

Environmental Project Manager

Nicole Marotz, AICP, LEED AP

Environmental Planner

Lead Report Preparer

THIS PAGE INTENTIONALLY LEFT BLANK.